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ABSTRACT

The first volume in a series of three, this report relates the in-depth studies of development planning in four Southeast Asian countries: Singapore, Malaysia, South Vietnam, and the Philippines. The studies examined the ways in which universities are assisting and can assist more in the formulation and implementation of national development plans and programs. Each country study consists of historical background, national development objectives and strategies, major problem areas, the role of the university (past, current, and potential), conclusions about the current situation, a bibliography, and statistical appendixes. (MSE)

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Development Planning in Southeast Asia: Role of the University

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Regional Institute of Higher Education and Development
Singapore

DEVELOPMENT PLANNING IN SOUTHEAST ASIA:
ROLE OF THE UNIVERSITY

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PREFACE

This is the first of three volumes of a RIHED study on the role of the university in development planning in Southeast Asia. It consists of an introduction and four country studies – Singapore, Malaysia, South Vietnam and the Philippines. No comparative analysis of the four country studies is attempted in this volume.

The second volume will contain the country studies of Indonesia, Khmer Republic, Laos and Thailand. In the third and final volume, a comparative analysis of all the eight country studies will be attempted.

This study is the result of a cooperative effort of scholars in the region under the sponsorship of RIHED. The project calls for a researcher from each country to work with a RIHED staff member whose role is that of project director. Each country collaborator conducts the research on his own country and the project director's task is to do a comparative analysis of the country studies in addition to supervising the overall project. It is hoped that this kind of collaborative research among scholars in the region would lead to long-term benefits in terms of regional cooperation in research and help to develop research competence in the region.

This project is partially financed by UNESCO.

April 1973

Yip Yat Hoong

INTRODUCTION

All countries in Southeast Asia have recognized the importance of planning as a means of advancing and accelerating economic growth. Each has drawn up development plans of varying degrees of comprehensiveness. Although these plans have different priorities depending on the political structure, social system and national aspirations of each country, they all give considerable emphasis to social and economic development and stress the importance of raising living standards. In the implementation of these plans, however, the countries have achieved varying degrees of success.

In the formulation and implementation of these development plans, all countries in Southeast Asia have more or less one common problem – the shortage of technical and managerial expertise. Consequently, such expertise have to be imported, often at great cost to these countries. Yet, most of these countries have well-trained resource personnel in their universities whose expertise have hardly been tapped for this purpose. So concerned was RIHED with this situation that a workshop was held in 1971 to examine the role of universities in national development planning in Southeast Asia.[1] The purpose of this workshop was to explore ways in which universities could contribute more fully to the planning and implementation of development programmes in the countries of Southeast Asia. To this end, the workshop brought together senior members of the academic community and senior officials of the development agencies from each of the countries of Southeast Asia to focus their attention principally on the research, consulting and training inputs from universities in both national planning processes and development programmes.

The workshop pointed to an increasing interest in Southeast Asia in greater cooperation between universities and government agencies in the pursuit of national development. From the papers and the discussions at the workshop it was revealed that there are already instances of effective use by governments of university capabilities on the one hand and development orientation on the part of the universities on the other. However, it was also pointed out that there are indeed many problems and shortcomings in effecting a collaborative effort with universities and government agencies playing their respective complementary roles in this common endeavour.

A number of reasons were advanced for this lack of effective cooperation between universities and government agencies in the development process. Among these were:

(1) A numerical shortage of staff at the universities, particularly in view of the rapid increase in enrolments;

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[1] See Yip Yat Hoong, (ed.), *Role of Universities in National Development Planning in Southeast Asia*, proceedings of the workshop held in Singapore, 26-29 July 1971, Singapore, RIHED, September 1971.

(2) Shortage of qualified, experienced staff at the universities to participate in cooperative programmes with government agencies concerning research, consultation and training;
(3) Inadequate resource allocation to universities for research and training purposes;
(4) Hesitance on the part of government leaders and officials to give academicians access to confidential information;
(5) Lack of foresight on the part of development planners and other development officers, thereby not allowing for sufficient time to conduct research prior to decision-making; and
(6) Inability of academic staff to adequately appreciate the context of development goals and problems.

In spite of the present difficulties, closer cooperation between universities and government agencies is likely to be achieved in the future given the current and anticipated developments of the universities and given the strong desire of the universities and the government agencies to cooperate in national development planning. Some of the reasons for believing in this were as follows:
(1) The recognition that many types of research projects for the government can be executed more effectively within an academic institution than within a government agency. The environment and facilities available in a university are often more appropriate for detached research than those provided in a government bureau;
(2) Many universities in Southeast Asia are staffed primarily with young academicians. As they mature and gain experience, more will be capable of making meaningful contributions towards development planning;
(3) Already there are a number of cases of university professors joining government agencies and departments in key positions. Many of them will in time return to university life. As this trend of mobility between the university and the government continues, a foundation is laid both for closer cooperation and for development of teaching and research competence among staff members who combine academic and operational experience; and
(4) While the number and quality of university staff improve, government agencies will also have an increasing number of officers with advanced educational qualifications. As this trend continues, these professionals in the government will have the confidence and insight that will encourage them to rely more heavily on outside research and consultation inputs.

The workshop suggested the following areas where positive action would strengthen university-government cooperation:
(1) Development planners should take a broad view of development recognizing that both the variables involved and the implications of development go well beyond the technical or substantive area at hand. Both for successful implementation and to prevent undesirable side-effects of development action, they should be sensitive to the need for consultation and research in those related and affected areas;

(2) Universities should scrutinize their concepts of what is 'academically respectable'. Too often government agencies do not receive the anticipated assistance from universities for their training requirements because of an inflexibility on the part of universities regarding programme contents;

(3) Universities should give adequate recognition to academic staff members serving as consultants, conducting applied research for government agencies and taking part in extension training programmes. In a truly 'development-oriented' university, such experiences on the part of staff members make them much more valuable as members of staff than some highly theoretical contribution to knowledge published in an international professional journal;

(4) There is no way for academicians to become effective contributors to development planning other than by gaining experience. The following are several alternative ways for gaining such experience: (i) serving temporarily as planning or development officers with a government agency, (ii) giving a junior staff-member an opportunity to contribute in a research or consultation capacity, even while recognizing that the quality of his early contributions may be limited, and (iii) attaching local staff members to consultation or research teams as counterparts of experienced foreign advisers.

(5) University staff members will limit their acceptability if they insist indiscriminately on 'academic freedom' or if they expect the implementation of their 'optimum' scientific and technical solutions regardless of other considerations; and

(6) To move away from the personal, *ad hoc* nature of university consultation and research for government agencies, an institutional framework needs to be set up. Some universities have found it effective to establish research units or centres through which contact and communications with government agencies can be channelled. This arrangement has the advantage of facilitating multi-disciplinary participation and makes it easier to work with the university administration, and governments can be more readily assured of quality products and adherence to agreed-upon research conditions.

Although this workshop succeeded in identifying some of the main problem areas pertaining to cooperation between universities and government agencies in national development planning in Southeast Asia, the recommendations emerging from the workshop can have only limited usefulness for specific countries in the region. This is because of the vast difference among countries in Southeast Asia in terms of the structure and content of their higher education systems, their development objectives, their political structures and their natural aspirations. Therefore, in order to examine this problem more closely and to bring about a greater relevance to individual countries, RIHED has sponsored a number of national seminars in the respective countries as a follow-up to this workshop to deal with specific problems in a country.

So far, three national seminars have been held – in the Khmer Republic, Thailand and the Republic of Vietnam. The Khmer national seminar, entitled 'Higher Education and Development', was held in December 1971 in Phnom-Penh under the auspices of the Ministry of National Education and Culture.[2] It was attended by university and government representatives. Among the topics discussed at this seminar were university curricula, relationship between the universities and the national development process, and the planning of higher education in the Khmer Republic.

The Thai national seminar, entitled 'Role of Universities in National Development Planning in Thailand', was held in March 1972 in Bangsaen. It was organized by the University Development Commission of the National Education Council and was attended by representatives of both universities and government agencies. The purpose of the seminar was 'to find ways and means to institutionalize the coordination between universities and government development agencies in Thailand'. Recommendations emerging from the seminar included ways of improving research capacity of universities and of bringing universities and government agencies more closely together in the development process, ways of increasing government use of universities in development planning, and ways of increasing university consulting services for the government.[3]

The Vietnamese national seminar, entitled 'Role of Universities in National Development Planning in Vietnam', was organized by the University of Hue under the auspices of the Ministry of Education and held in November 1972 in Saigon. The purpose of the seminar was to assess the current and actual contributions made by the universities in national development planning, to propose potential contributions in the forms of research, consultation and training, and to define the conditions which would foster the effective participation of universities in development planning. The seminar was attended by academicians and government planning and development officials, including the Minister of National Development and Planning.

The present study is an attempt to go beyond the exploratory state initiated by the regional workshop and the national seminars. It involves an in-depth study of development planning in Southeast Asian countries and the ways in which universities are assisting and can assist more in the formulation and implementation of national development plans and programmes.

The study covers the countries of Indonesia, Khmer Republic, Laos, Malaysia, the Philippines, Singapore, Thailand and the Republic of Vietnam. It is carried out in two stages. The first stage consists of individual country studies to be carried out under a common and standardized framework. The second stage consists of a comparative study based on the country studies. To enable the comparative analyses to be carried out at the second stage the country studies have to follow a standard format and uniform framework for the collection of

[2] See Ministry of National Education and Culture, Khmer Republic, *Higher Education and Development*, Phnom-Penh, 1972 (Preliminary report in French).

[3] See 'Role of Universities in National Development Planning in Thailand — a Report', Singapore, RIHED, 1972 (unpublished).

data, the analysis of problems, and the presentation of the findings. Below is the outline for the country studies.

Section 1: Historical Background
1.1) Brief description of social and economic development over the past ten years
1.2) History of development planning in the country
1.3) Nature and scope of development planning
1.4) Evaluation of development plans
1.5) Role of the universities (if relevant)
Section 2: Development Objectives and Strategy
2.1) Social and economic policy
2.2) Development objectives
2.3) Development targets – employment, investment, etc.
2.4) Sectoral development programmes – agriculture, mining, manufacturing, etc.
2.5) Policy instruments – monetary policy, fiscal policy, trade and commercial policy, etc.
2.6) Role of the private sector
2.7) Administrative machinery for planning and implementation
Section 3: Major Problem Areas
3.1) Technical problems of planning – planning techniques, data gaps, etc.
3.2) Political constraints
3.3) Socio-cultural constraints
3.4) Administrative obstacles
3.5) Infrastructure constraints – physical and human
3.6) Other problems
Section 4: Role of the University
4.1) Brief description of higher education development in the country
4.2) Role and purposes of higher education in the country
4.3) Coordination of higher education planning with national economic planning – e.g. university expansion and national manpower needs
4.4) Survey of university resources available for development planning purposes
4.5) Extent of university involvement currently prevailing in the formulation and implementation of development plans
4.6) Types of contribution the university could make towards development planning – training, research, consultation, etc.
4.7) Factors preventing a closer cooperation between the university and the government
4.8) Recommendations for alleviating these problems and bringing about a closer working relationship between the university and the government for development planning
Section 5: Conclusions

Section 6: Selected Bibliography
Section 7: Statistical Appendices

The present study is conducted by a team consisting of a project director and eight researchers, one from each of the countries of Indonesia, Khmer Republic, Laos, Malaysia, the Philippines, Singapore, Thailand and the Republic of Vietnam. Each researcher has taken six to eight months to complete his country study. The project director, in addition to providing general supervision for the project, is responsible for the comparative study based on the country studies. The following is the research team:

Yip Yat Hoong (Project Director)

Amran Halim (Indonesia)
Tan Kim Huon (Khmer Republic)
Viliam Phraxayavong (Laos)
David Lim (Malaysia)
Vincente B. Valdepenas, Jr. (Philippines)
Lee Soo Ann (Singapore)
Saeng Sanguanruang (Thailand)
Nguyen Truong (Vietnam)

Part 1

SINGAPORE

LEE SOO ANN

SECTION I

HISTORICAL BACKGROUND

Social and Economic Development Over the Last Ten Years

The various changes in Singapore over the last decade have to be seen in the light of its separation from Malaysia in 1965. It was in Malaysia for only two years – from 1963 to 1965 – and the early 'sixties were taken up with negotiating the terms of entry, effecting a referendum and other preliminary procedures. The birth of Singapore as an independent nation in 1965 was, in contrast, a most rapid process, but new policies soon grew around the concept of a viable neutral Singapore. New aspects of social and economic development took shape around these policies. When we compare 1962 and 1972 we are therefore comparing two radically different situations, for in the former year, Singapore was a state under British jurisdiction with the British having responsibility for defence and foreign policy while in the latter year Singapore was a fully independent nation.

The most salient feature of the last decade is the rapid economic growth since 1968. Adjusting for the small rise in prices as reflected in the official consumer price index,[1] the gross domestic product at factor cost has grown by about three times since 1962, or about 11 per cent. a year. The growth has been most rapid since 1967, averaging 15 per cent. a year in real terms.

Such impressive growth was accompanied by a structural bias towards output in manufacturing, construction and domestic trade, as seen in Table I.1. The contributions of government services, tourism and banking have grown impressively from the small base each used to occupy. Defence expenditure was, for most of the period, a British responsibility, and there was a decline when the Labour Government in Britain effected a withdrawal of armed forces. This decline in the defence contribution to value added has, however, been arrested by the subsequent build-up of a local defence capability.

Singapore was also a youthful nation in terms of its population age-structure. Throughout the 'sixties, more than half of the population were under 19 years of age and the number of economically-active was further reduced by the high proportion of women tied up in housework. In the 1957 Census, 80 per cent. of the female population aged ten and above were economically-inactive and while the 1966 Sample Household Survey showed that the female economic activity participating rates were higher than in 1957 for some groups (41 per cent. as compared to 23 per cent. for the 20-24 age-group and 24 per cent. as compared to 17 per cent. for the 25-34 age-group) the level of participation by women in

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[1] The items in this index and their weights were based on a household survey in 1959. As income grows, consumption patterns change and it is reasonable to expect this index to be increasingly unrepresentative by 1972. A new index is to be constructed soon by the national statistics department.

Table I.1

Percentage Distribution of Gross Domestic Product by Industrial Origin

	1962	*1965*	*1967*	*1968*	*1969*	*1970*	*1971*	*1972* *(prelim)*
Agriculture & fishing	5.8	4.6	4.0	3.5	3.2	3.0	2.9	2.8
Manufacturing	10.4	13.6	16.7	16.8	18.6	20.2	22.1	23.5
Construction	3.0	4.3	4.1	4.2	4.3	5.3	6.3	7.5
Electricity, gas & water services	2.2	1.8	2.5	2.6	2.5	2.5	2.3	2.4
Wholesale and retail trade	30.3	25.4	27.0	30.7	32.0	30.5	28.6	27.1
(a) Entrepot trade	(16.0)	(10.0)	(11.0)	(12.6)	(13.8)	(12.1)	(10.5)	(9.5)
(b) Domestic trade	(14.3)	(15.3)	(16.0)	(18.1)	(18.2)	(18.4)	(18.1)	(17.6)
Ownership of dwellings	4.4	4.2	4.1	3.9	3.8	3.6	4.3	4.9
Government services	6.9	7.0	7.2	7.1	6.6	6.9	6.6	6.6
Other services:	37.0	39.1	34.4	31.2	29.0	28.0	26.9	25.2
(a) Military services	(12.7)	(17.1)	(13.3)	(10.7)	(8.4)	(7.4)	(6.5)	(2.8)
(b) Tourism	(1.7)	(2.1)	(3.3)	(3.4)	(4.7)	(4.9)	(5.1)	(5.4)
(c) Banking & insurance	(22.6)	(19.9)	(1.8)	(1.7)	(1.7)	(1.7)	(1.9)	(2.1)
(d) Other			(16.0)	(15.4)	(14.2)	(14.0)	(13.4)	(14.9)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
GDP at current prices in $ million	2,371	3,043	3,692	4,257	4,833	5,657	6,464	7,322
Population, in million	1.75	1.89	1.98	2.01	2.04	2.07	2.11	2.15
Per capita GDP	1,355	1,610	1,864	2,117	2,369	2,733	3,064	3,405

Source: Singapore, *Annual Yearbook of Statistics*, and 1973 Budget speech.

economic activity was still lower than in Hong Kong. The 1970 Census results are still not published. In the nine-year period 1957-66 the number of persons working was estimated to have increased by only 14 per cent:, from 456 thousand to 524 thousand.[2]

Table I.2

Population by Age-Group

Age-Group (in years)	*1957 Census ('000)*	*1967 Estimates ('000)*	*1971 Estimates ('000)*
0 - 9	482.8	577.1	563.3
10 - 19	272.0	479.7	495.9
20 - 29	231.0	271.9	286.2
30 - 39	172.6	229.8	234.6
40 - 49	142.9	168.3	172.4
50 - 59	89.2	131.5	134.4
60 & over	55.4	97.3	101.1
Total	1,445.9	1,955.6	1,987.9
Males	762.7	1,012.9	1,028.0
Females	683.2	942.7	959.9

Source: Singapore, *Yearbook of Statistics,* various issues.

The annual rate of population increase has been slowing down from 3.5 per cent. for 1959-60 to 1.7 per cent. for 1970-1 due to a reduction in the crude birth rate from 37.8 per thousand in 1960 to 22.3 per thousand in 1971. The improvement in public health measures and private medical treatment which made this possible, also reduced the death rate from 6.2 per thousand to 5.4 per thousand for 1960 and 1971 respectively. Singapore has thus been, over the last ten years, a youthful healthy place, and succeeding in the task of holding down the rate of natural increase to a level low enough to be acceptable in view of the smallness of the island.

How was Singapore able to provide for both the housing and other needs of its growing young population as well as the land and capital requirements of industrialization and economic diversification? In the last decade, only a few square miles of land were reclaimed and consequently added to Singapore's land size: the more important measures adopted by the government included diversification of land uses; separating out land from purely agricultural purposes; and putting waste, forest and marsh land to industrial, housing and urban uses, as seen in Table I.3.

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[2] You Poh Seng, 'The Population of Singapore 1966: Demographic Structure, Social and Economic Characteristics', *Malayan Economic Review* (October 1967).

Table I.3

Land Utilization by Area
(in square miles)

Year	*Total*	*Built-up area*[a]	*Agri-culture*	*Cultivable waste*	*Forest*	*Marsh and tidal waste*	*Other*[b]
1961	224.5	62.7	54.7	45.3	14.6	17.7	29.5
1965	224.5	68.5	50.8	42.5	13.5	13.5	35.7
1967	225.1	70.0	48.5	38.5	13.5	13.5	41.1
1970	225.4	73.3	44.8	37.0	12.5	12.5	46.3

Source: Singapore, *Yearbook of Statistics*, 1971-2, Table I.2
Note: a. Includes new industrial sites.
b. Includes inland water, open spaces, public gardens, cemeteries, non built-up areas in military establishments and quarries.

Within the constraints of limited land size and a small proportion of total working population, clearly a certain amount of planning coincided with widening opportunities to provide the economic growth which Singapore attained despite the trauma of political separation in 1965 and British military withdrawal thereafter. In what form did planning in Singapore take?

History of Development Planning

Singapore had never been envisaged by the British as a political unit in itself but she nonetheless grew rapidly as a viable economic unit. When she was founded as a colony in 1819, she was a forward-base to counter Dutch politico-economic influence in the East; and from Singapore, British power spread to what is now known as West Malaysia. In the course of time, the British also gained what is now East Malaysia and Brunei. For the major part of Singapore's history (from 1867 up to 1942) Singapore was run administratively as part of the Straits Settlements (comprising Singapore, Malacca and Penang) but even then she was the headquarters for the British command in Southeast Asia. After World War II Singapore became an administrative entity in itself though the close ties with Malaya continued to be emphasized in common services, law and the use of a common currency. In 1959, Singapore was given internal self-government and the electorate voted in the People's Action Party on its platform of independence through merger with Malaya, sweeping changes in the education system, the establishment of an industrial court with full powers to arbitrate in labour disputes, equality for women and the eradication of communalism.[3]

A Party souvenir publication in 1960 stated that 'merger between the Federation and Singapore is historically inevitable' but it was not until 27 May 1961 that the Prime Minister of the then Federation of Malaya, Tengku Abdul Rahman, made his historic suggestion that the territories of Malaya, Singapore, North Borneo, Brunei and Sarawak could be brought together as a political and economic unit. From June 1959, the Singapore Government had to tackle the problems of the city-state by itself and it was only sometime after the Tengku's speech (in September 1963) that the Federation of Malaysia came into being with Singapore as a component state.

In the two-year period of 1959-61, vital decisions were made by Singapore leaders for the development of Singapore which were to cast the framework for economic and social planning in the decade of the 'sixties despite Singapore's entry into Malaysia in September 1963 and her separation some two years later (in August 1965). Why was there this urgency to act so immediately after taking office?

In 1959 Singapore faced many serious domestic problems. The 1950's had been a decade of increasing electoral representation in the legislature as well as having witnessed a transfer of executive responsibility to elected members of the legislature. In the 1955 legislative assembly elections, 156,000 persons voted, but in 1959, some 521,000 persons voted for the first fully-elected legislature in Singapore's history. In 1955 elected assemblymen held executive responsibility for various portfolios. In 1959, however, the key portfolios of finance, home affairs and labour were held, for the first time, by elected assemblymen belonging to the ruling party which had a clear majority in the Assembly.

Development planning started in 1960 with the preparation and publication of the State Development Plan, 1961-4.[4] The Plan addressed itself to the various problems then facing Singapore:

(1) The creation of employment opportunities for the children born in the post-World War II years who would be seeking employment in the 'sixties;
(2) The provision of adequate housing and secondary education, which were also consequences of the baby boom; and
(3) The raising of revenue and loans to fund capital expenditure over a medium-term period.

The exercise of full internal self-government in 1959 was therefore most timely as the policies needed for economic growth, social services and public finance were formulated by a local political leadership. These policies did not view Singapore as an appendage of the British empire or as a dependant of mainland Malaya. Rather, Singapore was viewed as an economic entity in itself whose problems had to be and could be solved by domestic effort, planning and skill. In contrast, colonial policies governing Singapore viewed the island as an outpost for British economic, political and military influence in the Far East, while the Malaysian Government's attitude towards Singapore, when Singapore was in Malaysia during 1963-5, was that of a city-state which could contribute to the development of the larger Malaysian entity.

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[3] Pang Cheng Lian, *Singapore's People's Action Party*, Kuala Lumpur, Oxford University Press, 1971.

[4] Published as a 'souvenir' document by the Singapore Ministry of Finance, 1961.

The view of Singapore as a viable economic unit pre-dated the actual independence of Singapore as a sovereign nation in 1965 so that the foundations laid in 1959-65 stood Singapore well in the uncertain first few years after separation from Malaysia and allowed her to capitalize on the opportunities that appeared in the late 1960's.

The four-year development plan period of 1961-4 was extended to 1965 and was followed by a Second Five-Year Plan for 1966-70.[5] Throughout the last decade, the development planning process focused around the three areas mentioned above, namely, expanding employment opportunities, social services and non-inflationary financing. In the late 1960's, defence entered as a fourth area of concern, and in the early seventies the objective of making Singapore a global city entered into policy formulation. At this point of time, more can naturally be said about the first three areas of concern which characterized PAP policy when they took office in 1959. The PAP has remained continuously in power since 1959, thus lending internal political stability to the process of development planning. Externally, events changed rapidly as British ultimate jurisdiction was succeeded by Malaysian sovereignty in 1963 to be followed by complete independence in 1965.

Nature and Scope of Development Planning

Up to 1965, defence and foreign policy were not the concern of the elected domestic government. After 1965, the Ministries of Defence and Foreign Affairs came into being but even then the umbrella of the British armed forces stationed in Singapore remained until 1971 when the pullout was completed. Only a small ANZUK[6] force remained and then only because there was a change of government in Britain in 1970. For the better part of the last decade therefore, development planning focused on domestic issues.

The scope of planning was public sector oriented. The market mechanism was allowed to operate freely in many respects as Singapore was too open an economic unit to permit effective implementation of market controls. Rather, planning took the form of controlling the range of resources and goods and services over which the market could allocate. The public sector not only took over the production of an increasing range of output but also provided its own system of incentives and deterrents through legislation and administrative measures so as to stimulate effort, rationalize decision-making and conserve losses.

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[5] This plan was not published.

[6] The initials stand for Australia, New Zealand and United Kingdom, which together with Malaysia and Singapore signed a defence treaty in 1971 providing for consultation in times of aggression.

In economic terms, the government took upon itself the task of enlarging the production-possibility frontier of the country by controlling the supply of a range of vital commodities. The private sector was free to capitalize on the profit opportunities that appeared so that although the *range* of resources and output over which it had control was limited, the volume of output produced through the market system remained high. Both the private and public sectors expanded, the former by a higher volume on a certain variety of output and the latter by a widening of government involvement in the economy. It goes without saying that only an expanding economy could have accommodated a growing public as well as a private sector without inflation: and this has been the experience of Singapore.

In terms of resources, land and labour training were put under government control. As the needs for industrial sites, urban needs and social services increased, the government was forced to acquire more and more private land and the cost of such acquisition was held down by such acquisition being largely on the government's valuation of the land. Today the government owns the major part of all the land in Singapore: as a consequence, the prices of the remaining private land in Singapore have sky-rocketed due to the small amounts that can be traded to meet increasing private demand, especially for upper middle-class residences. On the other side of the picture, some landlords have suffered from the low amounts they have received on government acquisition of their land

Labour training is embodied in educational facilities of all kinds. In the 1957 Education Ordinance the opportunity of equal treatment was open to all schools and the PAP continued the policy of giving grants-in-aid especially to the Chinese-medium schools which formed the bulk of the private schools. These schools hitherto were privately run, but with the government grant-in-aids, education in Singapore became a public sector activity pursuing a common syllabus in different language streams. The Polytechnic, Teachers' Training College and University of Singapore were the government-supported tertiary institutions of learning in the 1950's but government aid during the 1960's were extended to Nanyang University (a private Chinese-medium institution) and Ngee Ann College (originally started by a Chinese clan for technical training). The extension of aid in education in every case was accompanied by the raising of academic standards, the paying of teachers according to government scales (frequently higher than what they were getting before) and establishing administrative conformity with educational practices as laid down from time to time.

In terms of output, educational services, housing services and urban services became, under development planning, more of a government monopoly. From the above description of government grants to education, it is evident that the type and nature of educational services became less of private concern and conformed to what the government thought would be manpower needs for various categories of people. The Ministry of Education was a highly centralized authority which determined in what location new schools should be built while the university authorities had senior representatives of the government present to lay down policies for expansion and course requirements. The equal treatment of all schools meant that facilities were equally distributed over the whole school-going population.

Housing services were a major platform of the PAP in its 1959 victory and it set out to accomplish the target of 10,000 units a year in the 1961-4 development-plan period. A new statutory authority, the Housing and Development Board, was set up in 1960 and its progress in providing low-cost housing can be seen in Table 1.4. The current programme of the HDB calls for the construction of 20,000 units a year, mainly of an improved type to meet rising expectations.

Table 1.4

Units Under Management by House & Development Board at End-of-Year

Year	*Total*	*Dwellings*				*Shops*	*Miscellaneous (including open hawkers' pitches)*
		One-room	*Two-room*	*Three-room*	*Four-room & over*		
1961	26,168	2,397	9,653	12,028	2,090	939	148
1962	37,374	6,189	13,185	15,912	2,088	976	150
1963	43,889	6,483	14,702	30,547	2,157	1,122	152
1964	54,312	7,923	17,488	26,742	2,159	1,331	186
1965	69,660	16,891	20,884	29,670	2,215	1,552	148
1966	80,915	23,653	24,776	30,267	2,219	1,871	1,725
1967	84,683	24,298	25,812	31,894	2,679	1,971	3,080
1968	95,573	29,463	27,036	36,367	2,707	2,682	5,524
1969	108,823	36,844	27,407	41,878	2,694	3,447	6,122
1970	118,544	40,781	28,983	45,992	2,788	3,788	8,589
1971	126,710	43,077	30,717	49,682	3,234	4,177	9,162

Source: Singapore, *Yearbook of Statistics*, 1971-2.

According to the 1970 *Annual Report* of the Housing and Development Board, the population in HDB flats rose from 8.8 per cent. of the total population in 1959 to 34.6 per cent. in 1970. A recent new development has been the 'home ownership for the people' scheme under the government policy of allowing the use of Central Provident Fund credit for the purchase of HDB flats. As at 31 December 1970, a total of 31,154 flats had been sold (this number is separate from the total figures in Table 1.4), the majority of which are three-room flats.

The ability of the government to provide such massive numbers of housing units at low rental or purchase cost is tied in with the government acquisition of land from the private sector. The HDB flats which are rented out or sold have only a fraction of the land cost included in the building cost. Land, already owned or recently acquired by the government, is never sold again to private hands and at the most a ninety-nine year lease is offered. In comparison to the housing units sold by the private sector which have an exorbitant land cost included in the selling price, the HDB flats stand out as very cheap indeed and the availability of housing accommodation at low rentals during the last decade has been a major factor in holding the cost of living, and hence wages, down. Standard rentals are $20 a month for a one-room unit, $40 for a two-room unit and $60 for a three-room flat, with higher rates for flats located in certain areas where land acquisition cost is higher or for flats with improved designs. All these rentals have been scaled down from Singapore Improvement Trust levels and designed to be no more than 20 per cent. of the average wage-earner's monthly income. A two-room standard flat in Toa Payoh cost $4,680 per unit (excluding land) but could be bought for $4,900 or rented monthly at $46.50 A three-room (improved) flat in Redhill costs $7,340 per unit (excluding land) with a selling price of $7,800 which is approximately equivalent to eighteen months' income of the purchaser. Three-room (improved) and four-room units are sold and not rented out.

Urban services are of various kinds and have grown rapidly with the rising population and the needs to service trade, industry and a resident population. When the PAP took office, it scrapped the City Council and transferred the provision of gas, electricity and water which had been its responsibility, to a newly-constituted Public Utilities Board. A Ministry of National Development was formed with the Public Works Department under its wing to execute infrastructure development projects such as roads, bridges, drains, and sewerage besides government office buildings. The Singapore Telephone Board provided the domestic phone service while the Economic Development Board provided industrial sites, ready-made factory buildings, and in the late 'sixties, fitted factories, for rental or long-term lease. For long-term leases, a large premium is payable with only a nominal annual rent and this was usually requested by industrialists who had to construct factory buildings according to specific requirements, and so wanted more permanence on their land title. It should be noted however that in no case was land ever sold to industrialists and the leases were not for more than ninety-nine years. Prior to the entry of the Economic Development Board into industrial estate provision and maintenance, industrial sites had been developed privately along Bukit Timah Road, Redhill and a few other areas with the Singapore Factory Development Ltd. as a developing agency. The EDB however accomplished the gigantic task of transforming Jurong from a hilly farm and waste land into an industrial town besides setting up new industrial estates all over Singapore, such as at Kallang Basin, Tanglin Halt and Kranji.

The intention of the government to undertake the major provision of low-cost housing on a massive scale as well as that of urban services meant that the government dominated the construction and building industry. The government took care however not to enter into construction and building itself but merely supported these activities by its numerous contracts for building houses, roads and land development. The construction and building industry was based on a pool of available labour which could be mobilized for a particular contract job and then released again. In this way labour costs were never high as the labour pool was fed by the growing unemployed labour force then prevailing in Singapore. Persons looking for work also drifted down from West Malaysia.

Although building and construction continued to be privately organized for profit motives, the industry was in effect under government control as standards were checked during the progress of a contract and the penalty of being debarred from tendering for future contracts hung over every contractor. Hence the government obtained the efficiency of private activity through the competitive tender procedure with the standards demanded of the public sector.

When we include in the buildings constructed for education, the government share of total buildings constructed is significant, as can be seen from Table I.5. Development planning, by its emphasis on government provision of educational, housing and urban services output, gave a fillip to domestic investment as building was a major part of domestic investment in the last decade.

Public investment in housing remained dominant over the last seven years but in non-residential building, the initial lead set by the public sector triggered off a response by the private sector in 1969-71 with the urban renewal programme of the government. As can be seen from Table I.5, government residential construction in annual terms reached new heights by 1971 but completed government non-residential construction tapered off in 1971 relative to the upsurge in private

The increased share of domestic output accountable by the government (public) sector is not evident from Table I.1 which views output from value-added terms. In the 1960's, Singapore was a high investment economy and much of the building and construction investment was directly attributable to the government sector, though not operationally executed by the government itself. Similarly, the vast expenditures on education, social services and urban amenities by the government are not directly reflected in the size of the government services sector itself which is public administration proper. A better indicator of the expanding government influence in the economy is Table I.6 which, though not of national output, is about the total expenditure which falls mainly on domestic output and partly on foreign output (imports). Gross domestic expenditure needs to be adjusted by adding in exports and subtracting imports in order to obtain the gross national product.

Table I.5

Buildings Commenced and Completed
(Floor area in '000 sg. ft.)

Year	*Commenced*				*Completed*			
	Residential		*Non-residential*		*Residential*		*Non-residential*	
	Private	*Public*	*Private*	*Public*	*Private*	*Public*	*Private*	*Public*
1964	6,290	4,070	1,835	2,382	3,342	5,122	968	1,459
1965	6,100	5,903	1,248	1,963	7,719	3,774	1,756	2,082
1966	4,738	5,539	1,265	2,413	5,701	5,171	1,513	1,238
1967	4,906	7,701	1,509	921	5,461	5,340	1,282	2,102
1968	6,256	7,185	3,061	3,276	4,700	6,654	1,787	2,436
1969	6,886	5,746	4,424	4,892	5,698	6,898	2,264	2,436
1970	5,810	9,204	5,718	1,774	4,502	6,906	3,348	4,277
1971	7,001	21,832	8,516	4,524	4,525	10,499	3,780	2,662
1964-8	28,290	30,398	8,918	10,955	26,923	26,061	7,306	9,317
1969-71	19,697	36,782	18,658	11,190	14,725	24,303	9,392	9,375

Source: Singapore, *Yearbook of Statistics,* 1971-2 and 1967.

Table 1.6

Gross Domestic Expenditure Estimates
(At current prices in $ million)

Year (1)	*GDE* (2)	*Private consumption* (3)	*Private domestic capital formation* (4)	*Private demand total* (5)	*Government consumption expenditure* (6)	*Government domestic capital formation* (7)	*Government demand total* (8)	*% share of Col. 8 Cols. 8 + 5* (9)
1960	2,130	1,795	82	1,877	198	55	253	11.9
1961	2,468	2,018	136	2,154	215	99	314	12.7
1962	2,572	2,068	136	2,204	242	126	368	14.3
1963	2,907	2,302	162	2,464	277	166	443	15.2
1964	3,001	2,290	206	2,496	290	215	505	16.8
1965	3,235	2,444	260	2,704	315	216	531	16.4
1966	3,460	2,639	234	2,873	347	240	587	17.0
1967	3,787	2,883	293	3,176	386	225	611	16.1
1968	4,235	3,057	435	3,492	444	301	745	17.6
1969	4,761	3,264	666	3,930	542	289	831	17.5
1970	5,759	3,704	1,008	4,712	680	367	1,047	18.2
1971	6,716	4,083	1,407	5,490	766	460	1,226	18.3
1972 *(prelim.)*	7,644	4,454	1,578	6,032	902	710	1,612	21.1

Source: Singapore, *Yearbook of Statistics*, 1967 and 1971-2; 1973 Budget Speech.

Table I.7

Gross Domestic Fixed Capital Formation
(At current prices in $ million)

	Total	*Percentage by private sector*	*Percentage by public sector*	*GDCF GDE*	*GDCF GDP*
1960	137	60	40	6.4	6.5
1961	235	58	42	9.5	10.5
1962	262	52	48	10.2	11.1
1963	327	50	50	11.2	12.2
1964	421	49	51	14.0	15.6
1965	476	55	45	14.7	15.6
1966	473	49	51	13.7	14.1
1967	518	57	43	13.7	14.0
1968	736	59	41	17.4	17.3
1969	954	70	30	20.0	19.7
1970	1,376	73	27	23.9	24.2
1971	1,868	75	25	27.8	28.9
1972 (*prelim.*)	2,288	69	31	29.9	31.2

Source: Singapore, *Yearbook of Statistics*, 1967 and 1971-2; 1973 Budget Speech

The share of the sum of government consumption expenditure and government domestic fixed capital formation rose from about 12 per cent. of gross domestic expenditure in 1960 to 21 per cent. in 1971. In terms of domestic demand, the government played an increasingly larger role in the 1960's as this was a task assigned to the government in the development planning progress. To meet this demand, the government entered into the financing of educational and urban services though the actual production of housing units, roads and physical structure was largely carried out by contractors in the building and construction industry supervised by the public sector. That Singapore was a high investment economy is shown by the proportion of capital formation in gross domestic expenditure rising from 6.4 per cent. in 1960 to 31 per cent. in 1971. In the early 1960's, the government sector accounted for nearly 50 per cent. of all domestic fixed capital formation but this fell to about 30 per cent. in the late 1960's. The primacy of government capital formation was instrumental in stipulating private capital formation to the high levels it reached in the late 1960's and early 1970's.

In the last decade, gross domestic expenditure has been higher than gross domestic product. There has been a small but persistent import surplus as the continuous foreign capital inflow into Singapore as the metropolis for the region and a growing international financial centre enabled the liberal purchase of foreign output. There was no foreign exchange shortage as evidenced by the stability of the foreign exchange rate of the Singapore dollar to the sterling pound at 2s. 4d. which was altered to 2s. 8d. in 1967 when sterling was devalued. In terms of gross domestic output, capital formation rose from 6.5 per cent. in 1960 to 31.2 per cent. in 1971, which is a high proportion of output to be devoted to investment.

Evaluation of Development Plans

Due to its small physical size, Singapore has a different experience of development planning than other countries. In larger countries, development plans are concerned with the government exerting more control over the economy so as to pull it in certain directions. The emphasis is on particular instruments of control, such as the allocation of scarce funds for investment, expensive foreign exchange for imports, limited (in number) administrators for management and so on. The resource allocation problem is the key to solving development for the future.

In Singapore resource allocation is also important and the government made many key decisions concerning allocation at the start of the 'sixties. Priority was given to building low-cost housing units and to laying the infrastructure for industrial development. The savings that would otherwise have gone abroad were put to some good use in these lines. More important in Singapore was the mobilization effort. Development planning centred around harnessing available resources where once they were separate and disorganized. The element of control was not so crucial as the element of setting the appropriate background or environment. In fact much of economic activity was still carried out by private businessmen, as in the expanding building and construction industry. The government provided a hefty share of the funds for building and construction but other than providing this favourable framework, did not interfere directly into the production process.

The government was able to provide mobilization and rationalization by simply setting the background against which private enterprise would operate. As Singapore is small in size, this task was feasible, the more so since the PAP leaders who took office in 1959 were committed and dynamic people. By manipulating particular details of the background, the necessary motivation or incentives were provided to the private sector. Hence, private enterprise was able to flourish side by side with, or more accurately within the ambit of the framework set by the government sector.

The process of land acquisition by the government was an important part of the framework. Although this may at first sight appear to be deleterious to private enterprise, in fact, in the context of a growing economy, this proved to be a boon to private enterprise. The land so acquired was developed by the government as industrial sites, roads and housing estates. Private firms were able to rent or lease long-term from the government the developed land at cost price; private individuals similarly could rent or buy low-cost housing units. In reality the land belonged to the government but the private sector was given the right to use the land for a length of time and at a low cost. For industrial sites, the rental cost was only 6 per cent. of the capital cost of developing and acquiring the land. The cost of land acquisition was very often on the government's own terms and the development cost was determined by competitive tendering for the various contracts awarded in the completion of land development. Where premiums were paid, the leases for thirty years or more did not exceed ninety-nine years but this was more than sufficient for the industrialist or businessman to recover his invested capital. In the long run, therefore, the private sector benefited from the low land cost payable. If land had not been acquired and developed by the government, it could have been done by the private sector on a profit basis but the prices or rents payable would have been on an escalating scale as the total amount of land in Singapore is so limited. This is in fact what is happening to private residential land in Singapore today.

Another consequence of the government land policy was the restraint placed on the cost of housing for the bulk of the population. The 'sixties was a time when the dependency problem was acute for the working population especially when there was the spectre of greater unemployment hanging over the economy. The availability of low-cost housing units, in place of the slums in Singapore city, was a boost in real-income terms to the working population. Coupled with the import availability of consumer goods and durables, this was an important factor holding the cost of living down, thereby dampening the demand for wage increases.

Another important part of the framework set by the government was its emphasis on capital formation. Not only did this take the form of low-cost housing but also construction of roads, drains, school-buildings, utility, sewage and telephone installations and other public works. The aim was to build up the urban services and educational training provided by the government so that the location and population resource value of Singapore would be enhanced. Given the small size of Singapore, it is only to be expected that the government should be given the monopoly of these essential functions and the government vigorously set out its expansion programme in these areas within the planned framework of an autonomous modern city-state. This vision of a thriving metropolis was given a firm foundation in the crucial years before Singapore entered Malaysia. In 1959 Singapore had full internal self-government and her leaders had to find solutions to deep and wide problems. Although merger with Malaya was a political plank, the reality of it was quite far off and even when the concept of Malaysia was mooted in 1961, the bargaining on terms of entry made it more necessary for Singapore to have a viable economic future of her own for negotiation strength. Hence the emphasis on capital formation was directly linked to the political development of Singapore. The full internal self-government which Singapore enjoyed in 1959 was not suddenly thrust upon her. It evolved from the administrative separation of Singapore from Malaya at the end of the World War II.

Other important elements in the framework set by the government were the law and order of the state and the price stability encouraged by balanced budgets. By 1959, key posts in the government machinery were held by local civil servants. As a result of the implementation of recommendations made by the Malayanization Commission, the first local permanent secretaries of ministries had been appointed in 1957 and by 1959 the departure of senior British colonial officers had been substantially completed. The 1959 PAP government was thus enabled to implement its policies to achieve a thriving city-state without serious administrative impediment and any remaining problems in the policy orientation of civil servants were eliminated by the establishment of a Political Study Centre for senior civil servants. Balanced budgets were a financial necessity because of the colonial-type currency issue arrangement which meant that borrowing from the monetary authority was not possible. Hence the government was limited to borrowing from the private sector or dipping into accumulated reserves. Borrowing from the private sector was effected largely through the Central Provident Fund mechanism as there was hardly any monetary control of commercial banking through the operations of public debt issue and redemption.

SECTION II

DEVELOPMENT OBJECTIVES AND STRATEGY

Social and Economic Policy

In established nation states, it is customary to pose social and economic policy in terms of redistributing income or meeting the needs of minority groups or maintaining economic stability. In Singapore the objective from the very beginning was the creation of a viable and economically self-sustaining state. This task was thrust upon the PAP when it came to power in 1959 although its platform envisaged, among other things, merger with Malaya. The task was accepted by the PAP because of the urgency of the housing, education, employment and infrastructure problems. Although the PAP moved Singapore into merger with Malaya and British Borneo to form Malaysia in 1963, it still envisaged Singapore very much as an autonomous economic unit[7] and the final terms of the merger in fact gave Singapore freedom to set its own education and labour policies. In retrospect, this view of Singapore as a viable economic entity held her in good stead when separation did take place in 1965, followed by the announcement in 1966 that the British would be withdrawing their armed forces from Singapore eventually.

From the perspective of national economy building, social and economic policy was effected on a wide range of matters to mobilize resources, promote growth and regulate economic activity and performance. The low-cost housing programme not only served to meet an urgent need but solidified the foundation for loyalty to Singapore on the part of her citizens as shelter is a personal need the satisfaction of which normally results in social stability. The education programme was not only an investment in human resources but also the utilization of an opportunity to win the hearts and minds of children to the concept of an independent and viable Singapore. The land investment and infrastructure preparation for industry were not only to meet employment problems head-on, but also to deepen the stakes of economic activity, which traditionally centred around fast moving trade. The government acquisition of land and the prudent balancing of budgets provided a non-inflationary bias to growth so as to attract long-term investment and reinforce the tendencies for permanent stakes in Singapore. A family planning drive was carried out by the government in order to limit the population to what can be sustained permanently by the island's small size and resources.

In many ways Singapore's dependence on the outside world increased, for greater growth meant dependence on foreign materials, goods and markets.

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[7] The PAP view of Singapore may have therefore clashed with the federal government view of Singapore as merely being on the fringe of the Malaysian economy.

Foreign capital moved into Singapore in large amounts, accompanying foreign technological and professional expertise. Such greater foreign dependence was on the advanced nations of the world and not so much on Southeast Asian region countries. If anything, the growth of Singapore was oriented in such a way as to make Southeast Asian region countries depend on Singapore rather than the reverse.

The objective of social and economic policy was therefore to carve for Singapore a place of equality with the other independent nations of Southeast Asia, based not just on name but also on economic success founded on permanently based factors.

Development Objectives

The Singapore Development Plan for 1961-4 projected the average annual increase in the size of the economically-active population at 10,300 for 1957-62, 15,820 for 1962-7 and 21,080 for 1967-72. For 1961-4, the increase was estimated at 53,000. Partly because of the migratory surplus of adults moving down from Malaya, the total unemployed in 1959 was put by the Plan at 46,000 or about 10 per cent. of the work-force at that time. With the 53,000 to be added to the work-force in 1961-4 but deducting 15,000 as unavoidable frictional unemployment, this gave a target of 84,000 jobs to be created during 1961-4. In comparison, the employment growth in the intercensal decade of 1947-57 was 115,000.

The other major need on which the Plan was based was the list of social service requirements arising out of the rapid population growth in the post-war period. The requirements were for housing, schools, health facilities and community services.

Basically the development objectives of the Second Development Plan for 1966-70 were extensions of those belonging to the 1961-4 Plan. To quote an extract:

> . . . the main aim of economic planning in Singapore is to transform a largely entrepot trading economy into one based on a modern industrial sector. This strategy was initiated five years ago when the First Plan was formulated. The Second Plan is designed to develop this process a step further, in the light of past achievements as well as the changes in the political and economic framework of the Republic. The basic change is that whereas five years ago, the sights were on a common market with the then Federation of Malaya, the emphasis now is in developing the capacity to compete in export markets all over the world.

Other events however soon outdated the context in which the Plan was written. At the time of writing the Second Development Plan (in 1965) it was known that the component of Singapore's national income generated by the expenditure of the UK armed forces in Singapore and their families would not be a significant contributor to the economic growth of the Republic for very much longer. In late 1966 a definite date to the withdrawal of the British forces from Singapore was announced, namely the end of 1971. This gave the Singapore government barely five years to build up a local defence capability or partake in a regional defence arrangement. Defence expenditure in any country is a sizeable chunk of the budget and this announcement by the Labour Government threw the financing of the Second Development Plan into disarray.

Another event was the rapid upsurge in location of industries in Singapore following the disturbance in Hong Kong which reflected the Culutral Revolution in China during 1966. The Second Development Plan was basically promotional-oriented, that is, it was concerned with how to induce industry to provide employment for a backlog of about 610,000 by the end of 1965, plus new entrants to the labour market of about 95,000. When industrial growth began in earnest from 1967, the country found itself short of technically-trained labour in the required numbers. For 1966-70 no radical change in the orientation of the education system was planned for, as the emphasis was on industrial promotion and further construction of infrastructure, in order to attract the establishment of industry. There appeared in 1967, the urgent need to rewrite the Plan as an action-oriented one for technical education, in order to supply not only the numbers, but also the quality and training needs in industry.

Another event was the monetary split between the Federation and Singapore in 1967. The split occurred over how the assets of the Currency Board were to be legally held and reflected the mutual lack of confidence and trust following the political separation in 1965. Although the richer of the two, Singapore was much more dependent on overseas capital for the smooth functioning of her trading economy and she had to build up external confidence in her currency issue.

These three events did not change the development objectives of Singapore but gave an urgent note to the achievement of these objectives and re-emphasized the national survival of Singapore as an independent political unit. Hence when some industries from Hong Kong started to move into Singapore in 1967, the response of the Singapore government was to accelerate and widen the sources of foreign industrial inflow, although this required an even greater momentum in the redirection of education towards technical and vocational training. The sights for targets were raised in order to ensure the viability of Singapore.

Development Targets

The Development Plan for 1961-4 set a target of 84,000 jobs to be created during 1961-4. By 1965 the annual increase in the economically-active population was averaging 14,000. However, for 1960-5, the increase in actual employment was estimated at 57.6 thousand. The number of unemployed at the end of 1965 was put at 56,000 as compared to 44,000 at end-1960 and 23,000 at the 1957 Census.

The Second Plan for 1966-70 expected the increase in the economically-active population to average 19,000 annually, or a total of new entrants of about 95,000. Together with the backlog of 57,000, this meant a target of 152,000, but a realistic objective was set at 120,000.

The 1961-4 Development Plan envisaged public sector investment of $871 million over 1961-4, which was subsequently raised to $1,055 million. Later it was decided to extend the Plan for a year to include 1965. For 1966-70, the Second Plan proposed an expenditure of $1,730 million. Based on the First Plan's performance of gross capital formation by the private sector amounting to 49 per cent. of the total, it was expected that for the Second Plan, some $1,600 million of investment would have to come from the private sector. This would enable the target of $3,240 million in investment to be reached, assuming a capital output ratio of 2.5:1. The Second Plan aimed at a steady rate of growth of 7 per cent. per annum with annual investment at about 17.5 per cent. of the gross national product.

The target for the private sector was therefore residual by nature and the planners justifiably felt that it was impracticable to pin down more exact estimates as private enterprise activity had a tradition of being quite volatile. Although the economy had grown in 1961-5 at the annual rate of about 8.6 per cent., it was not a steady rate of growth and fluctuation had seen the rate falling to as low as 2.4 per cent. between 1963 and 1964.

The public sector was however called upon to greater efforts for 1966-70, and when one compares the physical targets for the 1966-70 period with the position as at end-1970, it is evident that a lot of the spadework done in the early 1960's would have been completed by the late 1960's. The following are some of the items on which a physical quantum can be set:

	1966-70 Target	*Expected Position at End-1970*
Industrial Estates		
Extension of Jurong complex	2,058 acres	4,568 acres
Three new small estates	153 acres	450 acres
Public Utilities		
Generation of electric power	240 MW	584 MW
Water supply	60 million gallons a day	164 million gallons a day
Gas production	6.0 million cubic feet per day	13.5 million cubic feet per day

Transport		
Roads – new and improved public roads	30 mls	470 mls
Deep-water berths at Keppel	4 (2,565 ft)	8 (5,000 ft)
Deep-water berths at Jurong	1,620 ft	3,000 ft
Coastal wharf at Jurong	1,250 ft	2,000 ft
Airport runway extension	2,000 ft	11,000 ft
Parking apron	10 aircrafts	25 aircrafts
Communications		
Telephone lines	34,400	103,400
Postal services	11 new post offices	52 new post offices
Education		
Primary schools	8	206
Secondary schools	35	104
Vocational training	5,300	6,500
Places at University of Singapore	960	3,820
Places at Singapore Polytechnic	1,752	4,000
Housing & Development Board		
Housing units	56,780	136,895
Shops	1,300	2,857
Sewerage		
Length	69 mls	415 mls
Connections	32,338	115,000
Persons served	378,000	1,200,000

Despite the fact that the Second Plan was not published, most of the targets were still adhered to by various government ministries in their execution of projects. The major changes were in respect of defence expenditure (to which the Plan hardly referred at all, as it was not known then that the British defence umbrella would be fully withdrawn by 1971), and in technical education, where arising out of the demand for technically qualified people, it was decided that one-third of school leavers should be technically trained in some way of other.

Sectoral Development Programmes

The sectoral balance problem is of much less concern to Singapore than to other countries. There is no large agricultural sector with its own needs and difficulties and whatever pockets there might have been of fishing, farming and handicraft activity were in any case rapidly erased by the expansion of urban services over the island, making for purposes of analysis, the whole of Singapore as a modernized country seeking rapid economic growth to alleviate unemployment.

Nevertheless the development plans did try to allocate the expected employment opportunities among the various sectors more as an indication of where people are likely to find jobs rather than as a means of securing the overall target. Of the 84,000 jobs targetted for 1961-4, 8,000 were expected to be in various government ministries such as education, police and health arising out of the emphasis in the First Plan on social service projects. Because of the emphasis in the Plan on physical development (utilities, public housing, land infrastructure and communications) another 12,000 jobs were expected in building and construction. In commerce, finance and services, assuming the same growth of employment opportunities as in the intercensal decade of 1947-57 and no decline in entrepot trade, a further 20,000 jobs were expected to be available. Consequently the balance of 44,000 jobs, or more than what was to be provided by the rest of the economy, was left to the manufacturing industry to provide.

In a review of actual performance in the first half of the 'sixties, the Second Plan revealed that during 1960-5, manufacturing provided 19,000 additional jobs while services provided 15,000 (employment in government services went up by nearly 12,000). Trade and commerce provided 11,000 new jobs while building and construction provided only an additional 7,000. The thrust provided by manufacturing and services was maintained in the Plan figures for new expected employment opportunities for 1966-70:

Manufacturing	45,000
Public services	15,000
Building & Construction	15,000
Trade & Commerce	12,000
Transport & Communications	6,000
Agriculture	3,000
All other services	24,000
	120,000

The output growth of the various sectors were placed as follows:

	Annual growth rate (%)
Industry	8-10
Entrepot trade	2
Construction	10
Government services	7
Other sectors	5
National growth	7

Although construction apparently did not play as important a role as expected in the early 1960's, it was hoped that with the almost doubling (in annual terms) of public development expenditure in the Second Plan, it would live up to its role as a provider of jobs.

On the other hand, the growth of government and other services as a provider of jobs had been underestimated in the First Plan. The Second Plan rectified this by a generous expectation for 1966-70. The growth of 'other services' reflected the grouping of an expanded population into new housing areas arising out of the activity of the Housing and Development Board as well as the demand for higher standards of living. 'Other services' stood for personal, domestic, transport and commercial (shops and hawkers) services. Increased activity in the development of both the economic and social services of the public sector saw to the increased employment of government.

One factor complicating the task of analyzing sectoral performance is the growth in recent years of defence and tourist activities. Tourism was only a small part of the economy in the early 'sixties but it grew rapidly in the late 'sixties, due largely to foreign-based factors (the affluence of the advanced countries, the expansion of aviation capacity and networks and the cultivation of the tourist potential through advertisements, personal reports and promotion measures). The growth of the tourist sector could hardly have been foreseen by the planners as Singapore was only one point in the world configuration of transportation. Similarly too, the growth of the defence sector (about which hardly any figures were available) could not have been foreseen by the planners.

The planners intended the industrial sector to play a leading dynamic role but as manufacturing was left to the private sector to take up as a profitable venture, the planners could not be fully confident of fulfilling their projections. The role of the government was confined to enlarging port facilities, improving means of communication laying out industrial estates, expanding electricity and water supplies and establishing financial institutions to aid industrial development, all of which required vast sums of expenditure.

The planners' projection for building and construction were more capable of fulfilment as the government was funding the major part of such capital formation on the island. The construction of low-cost housing units for the HDB, road building, land reclamation and preparation of industrial estates were all paid for by the government under whose supervision the private sector executed the projects. Another tool the government had was its control over land use and building regulations. From 1967 the government used its powers in these areas to spark off an urban renewal drive in the city centre. By permitting the destruction of old slums and a high density ratio for certain plots of land, the government made it profitable for the private sector to invest in big projects renewing the city core.

Up-to-date employment figures for the various sectors are not yet available as the 1970 Census figures have not yet been released but from Table 1.5 it is evident that building and construction entered a boom phase in the late 'sixties and early 'seventies. At the time of writing (1972) the building and construction industry was facing a shortage of labour and contractors had in fact to go to Malaysia to recruit gangs of labourers.

Policy Instruments

As an open economy with a very high trade/GNP ratio, Singapore was very much subjected to external forces over which she had very little means of control. Domestically, however, she is a small country with a very energetic leadership and the natural result was the adoption of a wide number of instruments to harness and secure the productive use of domestic resources.

As with other underdeveloped countries, Singapore inherited from the colonial government in 1959 a paucity of institutions to cope with the multi-faceted problems of national development. The City Council for example was an imitation of local government but totally inappropriate for Singapore which, with its small size, clearly could not afford separate levels of authority. The City Council had control over water, gas and electricity supplies and this in effect meant that the rural areas, which came under the jurisdiction of a Rural Board, would not get as much access to public utilities as the urban areas. One of the first acts of the PAP when it came to power in 1959 was to abolish this administrative distinction between urban and rural areas and entrust the work of providing utilities for the whole island to a new Public Utilities Board. Similarly too, the Singapore Improvement Trust had inadequate terms of reference, powers and funds for meeting the problems of clearing slums and constructing low-cost housing. The PAP in addition to abolishing the City Council also abolished the SIT and set up in its place a Housing and Development Board. The Singapore Improvement Trust was a municipal body to provide for the improvement of the town and island and although it tried to tackle the problem of housing in the post-war period, it was not up to its task as it was not a housing authority. In 1958, the best year of operations, it managed to complete only 3,841 flats, houses and shops. The HDB was formally established on 1 February 1960 for the task of building 11,500 housing units *each year* for the next ten-year period.

For the purpose of stimulating industrial development, the PAP government created the Economic Development Board with $100 million in capital funds in addition to $80 million (later increased) for the construction of the Jurong industrial estate. The EDB was given wide functions, from promoting industry and conducting applied research to granting loans and itself taking on equity participation in industry. In contrast the Industrial Promotion Board which was set up in 1957 had only $1 million in capital funds. As the work of the EDB expanded, the time came in 1968 when its functions were reduced so that the function of developing and managing industrial land was given to a newly-established Jurong Town Corporation and that of granting loans and indulging in equity participation was given to a newly-formed Development Bank of Singapore.

A key policy instrument was the use of legislative powers to create such statutory boards. Government ministers retained ultimate responsibility for the functioning of these boards for the members and chairmen of these boards were appointed by the ministers themselves. The Boards enabled specialized functions to be undertaken outside the machinery of the civil service which had its restrictive rules but all Boards were still within the ambit of policy control by the Singapore government Cabinet.

In order to secure growth without inflation (growth with inflation would have been unprofitable in real terms) a free import policy was adopted together with a balanced budget fiscal policy. A free import policy was a mere continuation of the free trade policy which Singapore always had, which encouraged competition between private traders. As a consequence, the cheapest sources of supply were always exploited and a large variety of goods were available (as Singapore served the needs of surrounding countries as well) permitting the population to choose the rate of inflation they want. The balanced budget policy was by necessity imposed on Singapore for in 1959 the PAP government inherited the lowest level of government reserves in any post-war year. Furthermore, the public sector could not borrow from the monetary sector as the Currency Board controlled the issue of currency according to a 100 per cent. backing formula. There was also no monetary authority covering Singapore as such until the establishment of the Monetary Authority of Singapore in 1970. The government was therefore confined to spending what it could tax, earn or borrow from the private sector. At the time of the 1967 currency split, Singapore wisely chose to keep the Currency Board system which required the fiscal discipline of balanced budgets.

As the rate of economic growth accelerated from 1967 onwards, the government brought into play another policy instrument – the mechanism of the Central Provident Fund – to compel a high rate of saving from the private sector. Contributions to the Central Provident Fund were increased from 5 per cent. from the employee to 6½ per cent. in September 1968 and then to 8 per cent. in 1970 and to 10 per cent. in January 1971. Contributions by the employer were of the same magnitude as that of the employee. The result was a continuous increase from 1968 in the annual contributions made to the Central Provident Fund and as the youthful and healthy composition of the population led to relatively small withdrawals from the Fund, the credit balances in the Fund rose to very high levels (See Table II.1).

The funds of the CPF were invested in long-term government securities, providing the public sector with the funds needed for its large capital formation programme. The government thus had an expanding but a balanced budget.

On the labour side, some trade unions in the early 'sixties were agitated by communists. Trade unions throughout the 'fifties had been a political force and, in fact, the PAP came into power in 1959 with trade-union help, as at that time the communists allied themselves with the PAP against the colonial power. The PAP, on coming into office, implemented as one of the planks in their platform the establishment of an Industrial Arbitration Court. This enabled industrial disputes to be arbitrated where conciliation and collective bargaining did not bring about settlement. In 1968 a radical Employment Act was effected, bringing the

Table II.1

Growth in the Central Provident Fund
and its Membership

Year-end	*Annual contributions (\$)*	*Number of members*	*Total balances (\$)*
1960	30,555,820	321,000	149,156,290
1961	32,642,143	338,000	181,032,331
1962	35,505,276	352,000	215,773,748
1963	37,646,158	369,868	258,159,792
1964	42,467,675	393,743	306,287,673
1965	46,909,164	417,594	359,023,625
1966	51,461,819	442,351	415,856,184
1967	55,837,579	465,029	477,315,488
1968	67,975,199	504,828	539,707,442
1969	106,567,523	560,133	632,160,253
1970	156,355,094	638,829	777,489,178
1971	223,606,843	714,657	987,881,259

Source: Singapore, *Government Gazette,* 17 November 1972.

various pieces of labour legislation together under some limitations of leave, overtime and labour rights in order to increase Singapore's competitive position for world markets. The discipline under which labour worked during the 1960's was an important factor contributing towards the rapid economic growth of the 'sixties. The government did not hesitate to use its hold over the labour force, which it increased through the National Trade Union Congress, as a policy instrument to achieve its goals.

Role of the Private Sector

The private sector was allowed free rein to make profits wherever it could. The government, to the extent that it controlled the funding of major projects, laid the limits to the profits that could be made since government demand was a strong component of total final demand in the economy. The government also saw to the compliance of the private sector to the laws governing the use of labour, the audit of accounts, the formation of companies, the safety specifications for health and the technical specifications where the general public would be affected. Industries, for example, could not be sited anywhere the entrepreneur wanted and the supply of utilities and communications ran according to prescribed standards.

The private sector was encouraged to invest for the long term by fiscal and financial incentives. Pioneer industry legislation provided tax relief for five years while tariff protection was available for those industries starting off on the home market. Loans at 6 per cent interest could be obtained from the Economic Development Board which would also be an equity participant in key industries. The provision of industrial land at a rental of 6 per cent. of the capital cost value of the site was itself a financial attraction as the entrepreneur would not have to sink in equity funds for land ownership or exorbitant rentals. A high gearing was possible for new ventures and the gearing was even higher for foreign enterprises associated with local capital. The foreign technology and the markets associated with such technology were what local capitalists wanted and in turn the foreign investor reaped the profits arising not only from the local operation but also from the supply of capital equipment, materials and technical assistance.

The concentration of government resources into housing, infrastructure development and education was a clear encouragement to the private sector to invest in the complementary areas of production and marketing and reap the profits for themselves. On the one hand, it was obvious that the government had hardly any more resources left, in terms of senior personnel or finance, to compete with the private sector while on the other hand, the improvement in land usage, accomodation and educational standards of the people were clearly an opportunity for investors to capitalize on.

A slight but perceptible change in government policy appeared in 1968 with the establishment of the Development Bank of Singapore and the International Trading Company (INTRACO). The fields of banking and trade had all along been a private domain and the fact that the equity of these two companies came from both the government and private firms meant that the government wanted to share in the profits being generated by the private sector. By the late 1960's, the industrialization policy of the government, which was started in 1960, was beginning to pay off in the profits made by many companies. In particular, the companies in which the government had equity participation through the EDB had become successful and these shares were transferred to the government when the investment and loan functions of the EDB were transferred to the DBS. Another contributory factor behind the government's interest in profit-making were the requirements of the military. The production of armament and coins for currency issue led to the establishment of Chartered Industries Ltd. as a commercial venture. There were other material needs which could be satisfied by local production and such enterprises would have required government control in any case. Hence the government itself set up companies in manufacturing, with itself being the major shareholder. The withdrawal of the British armed forces also prompted the government to set up new ventures, often with outside technical assistance, to use the installations left behind. An example was Sembawang Shipyard.

To date, it would appear that although the government has started companies or is a major shareholder in many others, it is not such a strong influence as to dampen hopes of private profit-making. An important consideration favouring an active role of the government in this respect is the tendency for manufacturing firms, once successful, to exert a monopolistic hold on the market. The government could counteract such a tendency by entering into production itself. It remains to be seen yet whether the government is seriously contemplating entering a wide range of manufacturing activities or is content with the key industries it now has a foothold in.

Administrative Machinery for Planning and Implementation

The government Cabinet makes the major planning decisions and in view of the compact nature of the island, often decides on the tactical details accompanying any major decision. Because of the close interaction between economic, political, social and security issues, the Cabinet does not meet separately to consider economic matters but takes each kind of matter as it comes along. Naturally the initiative for raising economic matters lies with the Minister of Finance but the close partnership between the senior ministers of the government makes it difficult to state exactly whose idea it was that resulted in a particular decision. After the 1972 general elections, the following ministers were designated senior ministers and this gives a hint that these five persons had been responsible for much of the advance planning and innovation in the 'sixties as they have been serving continuously as Ministers since 1959:

Dr. Toh Chin Chye	Science and Technology
Dr. Goh Keng Swee	Defence
Mr. S. Rajaratnam	Foreign Affairs
Mr. Ong Pang Boon	Labour
Mr. Yong Nyuk Lin	Communications

The Prime Minister, Mr. Lee Kuan Yew, has not only been continuously in office since 1959; he was elected to the Legislative Assembly in 1955 when the PAP first made its appearance on the active political scene and his committed dedication to advancing the interests of Singapore is well-known throughout the world. Apart from the Prime Minister and senior ministers, there are five other ministers in the Cabinet and the fact that the PAP has been continuously in power since 1959 has made this team of men a considerable force to contend with.

The economist in the Cabinet, Dr. Goh Keng Swee, has left his mark in the formulation of economic policy by the emphasis placed on proper organization, budget balance and the important role of saving. More than policy, his efficient administration of the Finance Ministry saw to it that public funds and manpower resources were placed to the maximum advantage. As a former senior civil servant, he was able to wield personal control over the working of the civil service to yield the performance results which the government sought. He changed to the Defence Ministry in 1965 but returned to Finance in 1967. In 1970 he went back to Defence. During 1965-7 the Minister of Finance was Mr. Lim Kim San, the former chairman of the HDB. Dr. Goh's successor as Finance Minister in 1970, Mr. Hon

Sui Sen, was also a former civil servant who served as chairman of the Economic Development Board from its inception in 1960 to 1968 when its functions were restructured. From 1968 to 1970, Mr. Hon was President of the Development Bank of Singapore.

The Finance Ministry was continuously in the hands of experienced administrators. Dr. Goh was both a visionary who saw the full perspective, and a brilliant tactician who was able to plot details of moves. Mr. Lim Kim San, as chairman of the Housing and Development Board, broke the back of the housing shortage in Singapore by the success of the HDB in building 50,000 housing units in 1961-5 Prior to entering politics, he had been a banker and businessman. Mr. Hon Sui Sen built up the EDB to its mammoth size in 1968, when it was decided that for reasons of efficiency its functions should be cut down, by newly-established bodies (JTC and DBS) taking over the land development, industrial estate management and loan-financing functions.

From the earlier descriptions of the planning process in Singapore, it is evident that the relevant administrative machinery was the civil service as a whole since the small size of Singapore makes any separation between economic and national planning meaningless. The civil service machinery in Singapore followed that of the British pattern, with each ministry headed by a permanent secretary. It is vitally important in this system for the permanent secretaries to be of the development-oriented and performance-counts type. As part of the constitutional progress of Singapore towards self-government, local permanent secretaries to all ministries were appointed in 1957. Thus, when the PAP took office in 1959, they at least had local people in charge of the civil service. Although it was easy to replace British expatriate officers by local people, it was harder to change attitudes especially when civil servants had worked under their colonial masters for a long period of time. The government therefore set up a Political Study Centre to 'indoctrinate' the senior ranks of the civil service into the new order of political events (self-government and national interest) and the imperatives of economic development and efficient performance. In 1970 the Political Study Centre was closed down but it had played a vital role in keeping alive the political consciousness in the execution of administrative tasks on the part of the civil service. Without such consciousness, the planning and implementation for Singapore development would undoubtedly have been affected.

Effective and knowledgeable cabinet ministers, local heads of the administration, and politically-conscious civil servants were the administrative machinery through which plans were implemented. In the Finance Ministry itself, a small department was set up to collect and evaluate projects and tailor proposed expenditures to the sums available. This department, the Economic Planning Unit, was set up in 1963 in the Prime Minister's office after a Colombo Plan expert, Dr. C.R. Krishnamoorthy, joined the Ministry of Finance as planning adviser. One of the first tasks of the Economic Planning Unit was to review the implementation of the 1961-4 Development Plan during its first three years. This review was published in 1964.[8] Preparatory work for the formulating and drafting of the next development plan was also done. For various reasons, the Second Development Plan for 1966-70, though prepared, was never published. The 1961-4 Development Plan was not prepared by a planning unit as such. It was written up from proposals submitted by the various government departments and ministries by a few officers of the Economic Development Division of the Ministry of Finance.

The Economic Planning Unit was itself closed down in 1969 with its major functions given to the Operations Section of the Economic Development Division. These functions were those of evaluating development expenditure proposals. The function of preparing the development budget (tailoring sources to uses of capital funds) was given to the budget branch of the Finance (Treasury) Division of the Ministry while the function of writing reports on economics topics was given to a newly-created economics section of the Economic Development Division.

The EPU was basically concerned with processing department proposals or ideas from statutory boards involving public development expenditure. A Development Fund had been set up in 1959 into which was paid an annual contribution from the ordinary budget, foreign aid received if any, and capital sums borrowed by the issue of long-term government securities. The Development Fund financed the annual development budget which was presented to Parliament (or Legislative Assembly from 1959-65) with the ordinary budget for legislative approval. The development budget was a list of projects, some new, some half-way through, on which development expenditure was to be incurred for the forthcoming year.

What constituted a development project rather than an item of special expenditure in the ordinary budget was determined by the size of the project, the time needed for its completion, and the commonsense of the officers receiving the proposals. In general, since the ordinary budget itself was closely scrutinized by officers from the separate Finance (Treasury) Division of the Ministry of Finance, any project of significance or highly regarded by the submitting ministry would come under the purview of the EPU.

The EPU, after processing a project proposal and then only after it was itself satisfied with the merits of the case, would send up the entire proposal (including all the correspondence that arose out of it) to the three members of the Cabinet who constituted the Development Planning Committee (DPC) – the Minister for Finance, the Minister for Law and National Development and the minister for the department which originated the project proposal. The Committee did not meet formally to deliberate on each project but the documents relating to the project were simply considered by each member in turn. Only when there was unanimous approval from all three members did the project get included in the

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[8] *Review of Progress for the Three Years Ending 31 December 1963*, Economic Planning Unit, Prime Minister's Office, 1964.

Table II.2

Extract from Development Estimates 1968
Head 21 – Primary and Secondary Schools

Sub-head no.	*Item no.*	*Title*	*Provision 1966-70*		*Estimated expenditure in 1966 and 1967*	*Provision for 1968*	*Balance to complete in 1969 and 1970*	*Note*
			Original	*Revised*				
		Secondary schools						
201	–	New secondary schools	42,173,000	20,243,000	17,731,300	2,211,000	300,700	Revot
202	–	Major extensions to existing secondary schools	8,000,000	4,730,000	3,586,400	1,143,600	–	
203	–	Reconstruction of Raffles Institution: -						
	001	Works and buildings	–	–	–	10	–	*
	002	Furniture and equipment	–	–	–	10	–	*
		General						
801	–	Furniture and equipment for new schools	8,000,000	8,000,000	1,000,000	1,000,000	5,196,800	Revot $127,
803	–	Minor improvements and extensions to existing schools (including furniture and equipment)	1,250,000	1,250,000	625,000	300,000	325,000	
		Capital grants						
901	–	Capital grants to government-aided schools	2,500,000	2,500,000	645,500	500,000	1,354,500	*

Source: Singapore, *Development Estimates 1968*, Economic Planning Unit, Economic Development Division.

*Subject to DPC approval.

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	Original	*Revised*				
s hools	42,173,000	20,243,000	17,731,300	2,211,000	300,700	Revote
to dary	8,000,000	4,730,000	3,586,400	1,143,600	–	
f Raffles						
ngs	–	–	–	10	–	*
uipment	–	–	–	10	–	*
uipment ls	8,000,000	8,000,000	1,000,000	1,000,000	5,196,800	Revote $127,800
nts and existing ding equipment)	1,250,000	1,250,000	625,000	300,000	325,000	
government-	2,500,000	2,500,000	645,500	500,000	1,354,500	*

Estimates 1968, Economic Planning Unit, Economic Development Division.

development budget.

For the years 1961 to 1965, there was the overall framework of the State Development Plan into which each approved project would fit. For the years 1966 to 1970, this five-year period was retained in the annually published development estimates. Where a project was not fully approved by the DPC, a token vote of $10 was put into the annual development estimates. Where an amount for a certain year was not fully spent, the unexpended sum could be carried forward into the development estimates of the following year, with a note to explain it as a re-vote. Table II.2 is an extract from the 1968 Development Estimates showing each of the various entries that could be found in the annual planning document as such.

In Table II.2, sub-head 901 provided for $500,000 and not $10 although it was subject to DPC approval. The reason is that what was at doubt was not the idea of capital grants to government-aided schools but the quantum to be given to each application as it came up, there being numerous applications each year. In the case of sub-head 203, the idea of reconstruction of Raffles Institution had still to be approved.

While the Development Planning Committee functioned as the policy-making unit of the government, the Development Planning Sub-Committee (DPSC) functioned as the technical unit to implement the projects within the finances provided. This sub-committee was chaired by the Director of Public Works with members from the department or ministry submitting the proposal, the EPU and representatives from specialist arms of the civil service who would be familiar with various facets of the project.

Although the EPU was abolished in 1969, the DPC and DPSC continued to function as all that was changed was a transfer of the servicing done by the EPU to the operations section, the budget branch and the economics section. Another change from 1969 onwards was the omission of the 'Provision of 1966-70' column, as it became evident in 1968 that the original and revised amounts for various projects were getting more different from each other. The decision not to publish the Second Development Plan was therefore a sound one in retrospect, as the assumptions on which it was based became more and more tenuous in the changed circumstances Singapore found herself in, and herself sought to change.

SECTION III

MAJOR PROBLEM AREAS

Although very much in the centre of Southeast Asia, Singapore became very much different so much so now it is hard to analyze her problems along the same lines as other Southeast Asian countries. From the very beginning, Singapore had been different but the tendencies prompting her to be unique have accelerated in the post-World War II years. These tendencies have come partly from factors outside her control but also partly from her own recent intentions. Unlike other Southeast Asian countries, she has no rural hinterland to fall back on or slow down the momentum of her material progress. Unlike other Southeast Asian countries, the population of Singapore was formed only in the last one hundred and fifty years, so that there was no 'indigenous' or 'local' population component who have traditions to upkeep or interests to protect. Singapore was also different because of the great role played by international trade in her daily activity, whereas the other Southeast Asian countries could shelter themselves in a certain degree of self-sufficiency.

Despite these differences, Singapore maintained strong links with the rest of Southeast Asia through regional trade and population movements, in particular with mainland West Malaysia as the British colonial administration imposed a common currency and communications service network. What Singapore faced in the 'sixties was a succession of changes in the parameters defining her development. When economists talk of development planning, the political framework and other parameters (such as foreign policy, monetary unit, defence, territorial boundaries, etc.) are taken as given or even if they do change, they do not affect the content of the planning in any significant way. This is the plausibility of the *ceteris paribus* assumption in economic theory which is also employed in the multi-variable process called economic development.

The major problem that confronted Singapore in the 'sixties – in fact the rest of the problems can be seen to be derived from this major problem – was the rapidity of changes in the very areas usually taken for granted as given in the economists' framework. Soon after she had been given the 1959 Constitution containing full internal self-government, the move towards merger with Malaysia began. From a British colony status (the 1959 Constitution could be suspended by the Secretary-of-State for the Colonies) Singapore became a part of the Federation of Malaysia in 1963. In 1965 she found herself an independent city-state. In late 1966 came the announcement of the ultimate withdrawal of British armed forces, with its consequential defence and foreign policy implications for Singapore. In 1967 came the currency split with Malaysia.

All the factors that would have been taken as given in other Southeast Asian countries – were rapidly changed in Singapore. For most of the 'sixties there was no published medium-term development plan. Only for 1961-4 was there published State Development Plan. Even the practice of having a four- to five-year perspective for development projects in the annual development estimates came to an end.

Yet Singapore could not have responded so rapidly and effectively to these changes if she were not a well-planned country. Planning was not however done in the framework of other Southeast Asian countries where, with territorial boundaries, monetary unit, constitutional processes, defence and foreign policy all more or less given, the governments sought to increase output, employment and exports while keeping prices stable through enlarged savings and investment. Such 'conventional' planning, as I would call it, faces its own set of problems such as the modernization of the rural sector, the attainment of certain economic magnitude targets, the volume of aid and trade and so on. Old-fashioned attitudes would have to be overcome, new institutions created and federal-state or central-local differences ironed out. Conflicting objectives – such as rapid growth and inflation – would have to be harmonized and plans of component units would have to be made consistent with each other in a larger whole. The larger the country, the more intractable these problems would be and the writing of this section for any of the other Southeast Asian countries would be much longer than in the case of Singapore for obvious reasons.

The major problem that faced Singapore in the 'sixties is not susceptible to a reasoned economics discourse, and it would require probably more than one treatise to explain adequately the various changes that hit Singapore. We are therefore left with the smaller task of spelling out how Singapore planned herself to respond so rapidly and effectively to these changes.

The reason why this is a smaller task is that the parameter changes which took place solved some of the planning problems that would have occurred in other Southeast Asian countries. For example, one of the typical (if that word can be used for Southeast Asia at all) Southeast Asian problems is that of rural-urban migration, aggravating the already serious unemployment problem in the cities. In Singapore this problem was neatly solved by the independence she suddenly obtained in 1965. In 1966, a national re-registration was carried out to determine who exactly were citizens and who were not, and foreigners had to secure permits (if they earned less than $750 a month) or a professional visit pass (if they earned more than $750 per month) if they wanted to work in Singapore. Another example was the attainment of true self-government. By joining the Federation of Malaysia, Singapore secured freedom from British colonial rule, something which she probably would not have obtained in any other way. Hong Kong, prosperous though she is, may lose out to Singapore because of her colonial status which does not give her population the incentive and drive as in the case of Singapore. The currency split in 1967, though viewed with dismay at that time, so that until today the two currencies are maintained at parity in spite of sweeping developments in the international monetary system, paved the way for the emergence in the 'seventies of Singapore as the financial centre of Southeast

Asia. Without a currency of its own, Singapore would not find it possible to develop the complexity and sophistication of financial markets.

The changes in the parameters surrounding Singapore provided the opportunities to forge ahead and erase some old problems at apparently little cost. In this sense, the problem areas for planning are lessened. We now have to see how Singapore planned herself to respond rapidly and effectively to these traumatic changes in Singapore's history.

The Singapore government first of all sought to control more and more of what was to be the increasingly scarce resources of the economy. Originally this intention was not deliberate for the government was prompted by social concern for the ill-housed and the increasing slums of the city centre. The only way in which large-scale housing could be provided at low-cost was to appropriate the land for government use at what it chose to value the land and leave out the land cost in the calculation of rentals and purchase prices. As housing construction is a time-consuming activity, the government drew up long-term plans to resettle farmers, tenants and squatters located on government land or privately-owned land to be appropriated by the government where such land was needed for housing or accompanying roads. By the relocation of a minority of the population and the appropriation of land from an even smaller minority, the pattern of land usage was changed dramatically as well as its ownership.

At the present time, about two-fifths of the population and more than half the industrial establishments in Singapore (this is only the writer's estimate) is located on government land. As the years progress, these percentages will undoubtedly increase as land is the only resource that cannot multiply itself. The area of land is being increased from hill-cutting to reclaiming sea land but all such reclaimed land is government land. There is no official figure for the percentage of total land in Singapore now in government ownership but this writer estimates this to be at least one-half. About 10 per cent. of the land in Singapore which were under British armed forces occupation have now reverted to the Singapore government. By its control over this vital resource, the government can influence decision-making at all those levels where location and spatial considerations are crucial.

The other resource which is not under government ownership but definitely under government control and influence is labour. The education system is fully under government control and for all males, the requirement of military service at the age of eighteen enables the government to control the deployment of more than one-half of those entering the labour force every year (as the participation rates for males in the labour force is more than that of females). Male citizens, after two-and-a-half years of military service, are placed on the reserve until the age of forty. The governmental capacity to direct occupational choice arises from the use made of these national servicemen in their two-and-a-half years of full-time military training, as not all of that time is taken up with military training proper for those who do not qualify for officer training. In the labour market itself, the National Trade Union Congress influences the work of most of the trade unions. The NTUC was on the side of the present PAP leadership in the struggle with the pro-communists in the early 1960's and today it serves as the effective bridge between the government and organized labour in Singapore.

Both land and labour are the scarce resources of Singapore; capital is relatively less scarce as it is attracted from abroad easily. Since the government has a great deal of control over the costs of land and labour, it can create (and in fact has been successfully doing so for the last several years) a high return for capital which will lead to capital inflow. The high return arises in two ways – through annual profits and through capital appreciation. Capital appreciation is often forgotten but is the more important especially in an underdeveloped country where capital values are low to start with. Unlike other Southeast Asian countries, the cost and availability of capital is not the crucial bottleneck for development. Singapore's vital assets are land and labour and government control over these two assets was part of the planning strategy to create a high return for capital so as to attract foreign capital with their productive technology and markets to set up badly-needed industry in Singapore.

The government has a share of the capital assets of the country, embodied in its ownership of low-cost housing units as well as in the shares of companies. In the early days of the EDB (the body created by the government to stimulate industrial development) foreign (and even local) investors wanted to have government participation in the industries they were starting. In 1968 when the Development Bank of Singapore took over the loan financing functions of the government, the equity portfolio of the EDB was handed over to the government. Since 1968, the government has not been investing directly in industry but through the DBS and INTRACO which have government participation. The full value of government participation in equity of all industries is not known but is expected to be considerable. In addition, the government owns Neptune Orient Lines and the Singapore Airlines as well as the port, public utilities and telecommunication and telephone services.

In the 'seventies and 'eighties, the regional and international parameters affecting Singapore's development are likely to change further. Singapore will need to retain an effective responsive capability against all forms of exigencies that may arise. Although there is a robust military capability, Singapore's defence against hostile intentions would increasingly take the form of economic link-ups with the advanced countries who use Singapore as a base to coordinate and plan their investments and financial and trading interests in the region. It is Singapore's intention to become so valuable that no one would want to see her go down, or to put it more positively, others would intervene if she was set upon. To perform this role, Singapore would have to be of use to both the advanced countries and the Southeast Asian countries, and to accomodate different and perhaps, conflicting economic interests within her borders. For example, while the government wants local enterprise to grow big and to prosper, it also permits foreign enterprise to come in freely, although this might lead to local enterprise being swallowed up. Another example is Singapore's interest in being a junction for international container traffic so that the goods can be transported to neighbouring countries in conventional freighter vessels. Or, as Singapore wants to have high-technology industry to increase labour productivity so as to offer higher wages to her citizen workers, she can also help alleviate the unemployment in West Malaysia by freely offering the low-paid unskilled and menial jobs to West Malaysians.

Undoubtedly Singapore's resource capability will be severely strained by such attempts to be almost all things to all men. Yet it would be wrong to suppose that Singapore was merely passively reacting to events as they occurred. Due to her small size and physical location, Singapore would have to react appropriately to regional and international movements or events. At the same time she has sufficient 'economic muscle' to set into propulsion certain tendencies in the regional context. To do so, she has to build up an excess of resource strength in certain areas so that she can follow through certain ideas with aid and back-up 'supplies'. In the community of Southeast Asian nations, Singapore is the youngest and smallest country but it is by no means the weakest in terms of economic strength. She wants to be accepted on equal terms by her neighbours and there is no better way for doing this than by making her contribution to the development of the region. As she is the most modernized country, her contribution can best be in terms of accelerating the modernization of her neighbours with special reference to certain specific fields.

The need for Singapore to play a positive, rather than only a reactionary role, in the region also arises from the limited range of responses she can offer from her land resource. In the 'sixties, despite her small size there was a wide range of choices arising from the imposition of new and efficient patterns of land use. Where once squatters, mangroves and hills stood is now large-scale housing, industrial estates and roads.

Since labour was available (unemployment was the major problem of the 'sixties) the central problem of development strategy was how to get industry to establish itself. By government control over land, and to a lesser extent labour, the government was successful in attracting both local and foreign capital to invest for the long term through the high return for capital made possible by relatively low land and labour costs in the region. Bearing in mind the strategic position occupied by Singapore and the colonial heritage of law, order and education, the cost of labour and land was relatively low.

In the 1970's, land and labour would not be so freely available for allocation into new uses. There are few large tracts of vacant land left in Singapore and the little that is available may have to serve a defence purpose. Similarly labour has been allocated into specific jobs and the annual entry into the labour market of new Singaporeans is insufficient to provide much choice for new economic ventures. At the present time Singapore has to depend on imported labour to keep the economic momentum going. About 10-15 per cent. of the labour force is foreign and the proportion is on the increase.

In the 'sixties, Singapore had vacant land and surplus labour to those who wished to make a long-term commitment. In the 'seventies, Singapore cannot offer land and labour and she cannot equally afford to lose elbow-room in making responses to events that may take place in the region. The vacant land and surplus labour were in a sense there already when Singapore set out on internal self-government in 1959. For the 'seventies Singapore has to create certain resources to be in surplus so that she can have some choices in responses.

An obvious kind of resource that can be created is high-level manpower resources. Another kind of resource is knowledge itself with Singapore serving as a clearing-house for information, ideas and data processing. This is where the universities come in. High-level manpower and knowledge resources do not need much labour or land. Their development may involve a lot of capital but this is the one resource that Singapore may be said to have in surplus. Universities with the assistance of capital can produce high-level manpower and knowledge resources from which Singapore can make a contribution to the region besides securing a freedom of choice for responses to be made in any exigency.

Another contribution of the university is in the domestic scene. In the 'sixties Singapore could not have made effective and swift responses to the rapidly-changing situations unless there was political stability. In the 'seventies, political stability can be expected to continue but new forms of unrest will emerge among the young generation, the young adults caught up in the rat-race of making a living and residing in tall flats and the old adults having to face the problems of lonely urban life. The university has in the past produced the efficient administrators and managers of modern Singapore. The role of the university in the future will be not only to produce more administrators and managers but also to produce leaders and conciliators for the tensions created by a rapidly-growing urban metropolis. Problems have to be defused before they become national issues and a larger body of institutions and specialist individuals have to be held together in a consistent whole despite the inherent divergent tendencies of each institution or individual. Only in this way can the development of Singapore proceed without boiling over into contention and dissipation. In other Southeast Asian countries, there is the expanse of different landscape and a larger body of people to absorb the problems created by development but there is no such safety-valve for Singapore. Non-economic factors have always been recognized as important for economic development and this is as true at the early as well as at advanced stages of economic development.

SECTION IV

ROLE OF THE UNIVERSITY

Brief Description of Higher Education Development in Singapore

Four institutions together are responsible for higher education in Singapore – the University of Singapore, the Nanyang University, the Singapore Polytechnic and Ngee Ann College. There is a fifth post-secondary institution, the Teachers' Training College, and at the time of writing, the government has announced that the TTC will give way to a proposed Institute of Education, details of which are still not available. Because the TTC caters for the training of teachers only, it has been left out of this study. Some general education is included in the curriculum but from the perspective of the role of education in development planning, the TTC plays only a very specific part which is not definitive enough for it to be included in this study.

Although the University of Singapore was established on 1 January 1962, its predecessor had played a prominent role in higher education and it is to this that we need pay attention. The idea of an institution of higher learning in Singapore dates back to 1823 when Sir Stamford Raffles proposed the establishment of a college which would provide educational and research facilities – a proposal which in fact gave rise to one of Singapore's oldest secondary schools, the Raffles Institution. The first successful venture in higher education was the establishment, following a public appeal for funds by the Straits Settlements and the Federated Malay States Governments, of a Medical School which was established in Singapore in 1905.

In 1912 the name was changed to the King Edward VII Medical School and in 1916 its Licence in Medicine and Surgery was recognized by the General Medical Council of Great Britain. In 1918 a suggestion was made that the most suitable memorial of the centenary of the founding of Singapore, which was then approaching, would be the establishment of an institution of higher education to be known as Raffles College, and a hope was expressed that this College would form the nucleus of a future university. A large fund was established by public subscription and the College was opened in 1929. From 1921 substantial academic expansion took place and the name was further changed to the King Edward VII College of Medicine. In 1929 a Department of Dental Surgery was created in the College and in 1947 its Licence in Dental Surgery was recognized by the General Medical Council. The early years were made difficult by a major economic depression and by 1934/35 the College had only eighty students. But from then on a steady growth took place. The College was still developing when the Japanese occupation of Malaya in 1942 brought its work to a halt, and the College buildings were put to other uses during the occupation. The College reopened in October 1946.

Shortly thereafter a commission was established under the chairmanship of

Sir Alexander Carr-Saunders to enquire into and make recommendations concerning university education in Malaya. After an intensive study of the country's needs and of the existing facilities for higher education, the commission recommended that the King Edward VII College of Medicine and Raffles College be amalgamated forthwith to form a University of Malaya. The commission's report was received in Malaya with enthusiasm and after very full discussion the legislatures of the Federation of Malaya and of Singapore enacted ordinances bringing the University into existence in October 1949.

For ten years, the University of Malaya, situated in Singapore, served the needs of both Singapore and the Federation of Malaya. In 1957 arising from the rapid expansion of the University, a commission of enquiry was set up by the governments of the Federation and Singapore. Arising from the commission's report and resulting from the recommendations of a Joint Constitutional Committee appointed by the two governments, legislation was passed in November 1958 providing for the continuance of the University of Malaya as a single University and the establishment of two largely autonomous divisions of equal status, one in each territory. The legislation came into effect on 15 January 1959.

In 1960 the government of the Federation of Malaya indicated its intention that the Kuala Lumpur division of the University of Malaya should become an autonomous separate national university in the Federation with effect from the beginning of the session 1962/63. Likewise the Singapore government indicated its intention that the Singapore division should become a separate national university in Singapore. Steps to achieve the establishment of these two separate universities were finalized during the year 1961 and on 1 January 1962 the University of Singapore was established. The annual recurrent costs of the University are now largely met by the government of Singapore. At its inception, the University had the Faculties of Arts, Science, Medicine and Law.

In 1963, discussions were started on a proposal to enable students of the Singapore Polytechnic under certain conditions to become registered students of the University and be eligible for the award of the University's degrees in Engineering, Architecture and Accountancy. Arrangements were completed early in 1966 and the First degrees of Bachelor of Accountancy were awarded in June 1967 while the first degrees of Bachelor of Engineering (Civil, Electrical and Mechanical) were awarded in June 1968. The first graduates in Architecture were in 1970.

During 1968, a decision was made to transfer the School of Engineering and Architecture of the Singapore Polytechnic to the University to become the Faculties of Engineering and Architecture. The Polytechnic School of Accountancy was likewise transferred to the University to amalgamate with the University's Department of Business Administration to form the School of Accountancy and Business Administration. In the 1960's the Faculty of Social Sciences was formed but was merged with the Faculty of Arts in 1969. The Faculty of Dentistry was created out of the Faculty of Medicine together with two schools out of these Faculties — the School for Postgraduate Medical Studies and the

School for Postgraduate Dental Studies. Today the University has seven Faculties, *viz.* Arts and Social Sciences, Law, Science, Medicine, Dentistry, Engineering and Architecture, and four Schools, *viz.* Pharmacy, Accountancy and Business Administration, Postgraduate Medical Studies and Postgraduate Dental Studies. The Department of Extra-Mural Studies is a non-faculty department.

While the University of Singapore, its predecessors and the Singapore Polytechnic used English as the medium of instruction, Nanyang University began with Chinese as the medium of instruction. In the colonial days before World War II, Chinese education in the region, now comprising the Federation of Malaysia and the Republic of Singapore, was virtually the sole responsibility of resident Chinese community itself rather than the concern of the colonial government. As might be expected, their school system followed closely the pattern prevailing in China. Students coming out of the Chinese high schools used to return to China for higher education but communist rule over China in 1949 brought an abrupt halt to the flow of Chinese high-school graduates seeking higher education in China.

The colonial government did not seem to appreciate the magnitude and seriousness of this problem precipitated by the closing of the avenue for higher education to numerous Chinese high-school leavers for they continued to prevent these young people from entering the then University of Malaya through the University admission requirement of a good secondary education in English. Thus the stage was set for a determined public agitation for the creation of an institution for higher education in the Chinese medium. A business magnate of Singapore, Mr. Tan Lark Sye, and a group of his peers formed themselves into a founding committee in May 1953 to promote a university where Chinese would be used as the chief medium of instruction.

A campaign to raise funds for the proposed university met with overwhelming response from people of all walks of life but the most valuable contribution of all was the donation of some 500 acres of land at Jurong in the west end of the island for the campus site by the Hokkien Huay Kuan of Singapore, a traditional communal association of immigrant Chinese from the province of Fukien on the South China coast. As the British authorities viewed the idea with disfavour, the promoters of the new university – which had been given the name of Nanyang, meaning South Seas, the ancient Chinese appellation for Southeast Asia – had to start without official blessings and register the institution as a company. The university was officially declared open on 15 March 1958 when the university had completed the first phase of its building programme.

The Nanyang University began with two colleges, Arts and Science, followed in the next year by the College of Commerce. The late 'fifties saw the quickening pace towards self-government in constitutional development and this was reflected in the ratification of the position of the University by the passing of the Nanyang University Ordinance on 27 March 1959 in the now largely-elected legislature. This set the seal on Nanyang as an institution for higher learning in the country. The problems for Nanyang were not over for the civil service in Singapore and

Malaya still held the view that for purposes of public service employment, only graduates from the government-supported Universities of Singapore and Malaya could be accorded graduate status in the filling of vacancies. Hence arose the question of the 'recognition' of the degrees conferred by Nanyang, which was to become a protracted issue for the next eight years. It should be noted here in passing that Nanyang graduates, on whose degrees officialdom at home was slow to confer 'recognition' were driven in inordinate numbers overseas to seek higher qualifications. Their acceptance into overseas graduate schools and subsequent success in earning postgraduate degrees from prominent universities in North America, Australia and Europe, paved the way for future 'recognition' of Nanyang degrees by the Singapore government.

During the early 'sixties, Nanyang's future was being shaped by the interplay of two forces, that of the University's need for state support in the matter of finance, and that of the government's desire to integrate the University into the state system of education which was largely British in structure. Nanyang was originally conceived along American university lines with degrees obtained by accumulating credits and the chief executive was termed President. Finally in June 1964, the two parties entered upon an agreement by which the preservation of Nanyang's identity was assured and the government would give financial support to the University on the same basis as to the University of Singapore, provided a reorganization was carried out. One part of the reorganization was the appointment of a Curriculum Review Committee in early 1965. Instead of Nanyang's original simple four-year undergraduate programme, the Committee recommended a three-year pass-degree course, to be followed by a one-year honours-degree course for pass-degree graduates of outstanding scholastic merit. Thus a major British element was introduced into Nanyang's degree structure.

The same committee also recommended the setting up of a language centre as a service department whose function it was to conduct remedial and intensive English language courses for students of all departments who were not proficient in the language. The tenor of the Committee's report was that equal emphasis should be given to English and Chinese, rather than primary emphasis on Chinese.

With the implementation of the Curriculum Review Committee's recommendations, the salary structure for the University staff was revised to be on par with that of the University of Singapore. This step removed the biggest obstacle to the recruitment of quality staff. At the Convocation in May 1968 the Minister for Education made the long-awaited announcement that the Singapore government formally recognized the degrees awarded by Nanyang University.

The first batch of graduates on the new degree structures came out in early 1969, and at the commencement of the 1969/70 session, honours classes made their first appearance on the campus. At the start of the 1970/71 session, the University's first-ever group of graduate students were admitted into the newly-established College of Graduate Studies which consisted initially of the Institutes of Asian Studies, Mathematics, Natural Sciences and Business Studies. The introduction of postgraduate education had been among the many plans for the

University in early 1969. For 1965-9 there had been only an acting Vice-Chancellor in the person of Professor Huang Ying Yung.

The Polytechnic was started in 1958 for instruction in a wide range of subjects (commerce, engineering, science, and architecture) leading to the examinations of overseas institutions, namely the professional associations and institutions in England. It had been drawn up along the lines of polytechnics in the United Kingdom. As these associations and institutions would not accept the school-leaving qualifications from the Chinese medium stream of education, about half of the school population in Singapore were not eligible to benefit from the courses at the Polytechnic. In the first academic session of the Polytechnic, the PAP election victory in May 1959 brought a change of government and with it far-reaching changes in the Singapore Polytechnic.

The new government was committed to a programme of rapid industrialization and technical education would provide the much-needed skills and professional knowledge required for the complex process of industrialization. The term of the chairman and nine members of the first Board of Governors came to an end on 20 July 1959 and the new Minister for Education, Mr. Yong Nyuk Lin, invited Dr. Toh Chin Chye, the Deputy Prime Minister, to take over the chairmanship of a new Board of Governors. At its first meeting on 11 August 1959, the Board immediately set about implementing the government policy. In order to concentrate on the training of professionals, technicians and craftsmen to the levels required for industrialization, the Polytechnic dropped courses of study for which adequate or comparable facilities already existed elsewhere in Singapore or where very small numbers of students were catered for in highly-specialized subjects. Hence, the Department of Science and Technology was abolished while the Department of Commerce was replaced by a new Department of Accountancy. It was decided to concentrate upon full-time and part-time courses in the Departments of Engineering and Building and Architecture.

The Board also decided to institute its own internal examination system so that all Singapore students could be eligible for admission rather than have many debarred on account of being in the Chinese medium stream. At the same time, the intention was to keep these internal examination standards high so that the Polytechnic could eventually claim recognition of its diplomas in foreign countries. To this end, the final examinations in professional courses were conducted with a system of external examiners as in the case of the University of Malaya in Singapore.

Further crystallization of the aims and objects of the Polytechnic took place in 1962-3. The great bulk of craft courses was transferred to the Singapore Vocational Institute as the Board of Governors decided that the general direction of growth should be towards the early achievement of university status. Courses would be confined to those for technicians and professional diplomas while the number of part-time professional courses were reduced with the intention of eventually eliminating them as it was felt that only through full-time study could satisfactory standards be achieved. The Engineering and Building and Architecture

Departments provided professional and technician courses while the Accountancy Department gave solely professional training. The Nautical Department gave special courses in wireless, telegraphy, radar observation and various levels of navigation.

In September 1963, a committee headed by Dr. (later Lord) B.V. Bowden visited the Department of Engineering to consider the question of establishing a Faculty of Technology at the University of Singapore and the award of degrees to Polytechnic professional diploma graduates. The outcome of the study was the agreement by the University of Singapore to award degrees to certain Polytechnic graduates in the professional stream. Further development on this line has earlier been mentioned in the description of the history of the University of Singapore. The Polytechnic thus found itself concentrating on technician training.

The 1967/68 annual report of the Polytechnic commented that the emphasis for future effort in increasing the academic staff must lie in the technician component. At present academic staff may be asked to teach either technicians or degree students. In the near future, however, it will be necessary to begin the process of asking staff to specialize in one or the other stream to prepare for the academic division which has been planned for some time. In May 1969 the fully operating and viable degree teaching components of the Polytechnic were transferred to the University of Singapore. With this transfer, the Polytechnic was left with only the School of Industrial Technology and the School of Nautical Studies. In addition to the technician diploma course which took three years in the School of Industrial Technology, a new course leading to a general certificate in industrial technology, taking two years of full-time study was introduced. Future plans called for the expansion of all full-time courses as it was found from experience that part-time instruction proved to be less efficient and economical.

To cope with the large expansion in numbers which had already begun in the 1968/69 session, it was decided to resite the campus on land adjacent to Ayer Rajah Road near St. John's School. The time needed for design and construction led to the transfer of some 600 students in the 1971/72 session to the Princess Mary barracks on Dover Road. It was expected that there would be a two- or three-year period when the Polytechnic would be operating on two or more campuses as the material supply and labour shortages caused by the unprecedented building boom in Singapore would cause delay in the completion of the new buildings.

Ngee Ann College was established in 1963 by the Ngee Ann Kongsi (a dialect clan group of the Chinese community in Singapore) as an independent college offering four-year degree courses in Arts, Science and Commerce. It was noted above, in the brief history of Nanyang University, that in the early 'sixties Nanyang's future was still being shaped by the interplay of various forces and it was probably due to the uncertain and unsatisfactory state of affairs at Nanyang (which had been founded largely by Hokkien merchants on land given by the Hokkien clan, which was different from the Teochew clan of the Ngee Ann Kongsi) that Ngee Ann College was founded.

Between 1964 and 1968, three reports were written by experts invited by either the government or the College to review the role of the College in the Singapore educational system. These reports recommended a number of changes, the main one being that the College should become a public institution of higher learning offering diploma courses in engineering and commerce in the Chinese *cum* English medium below the degree level to meet the growing needs of industry and commerce in Singapore. Once again, as in the case of Nanyang, it was a case of private initiative in the face of inadequacies of the colonial educational heritage left by the British.

This main recommendation was accepted and in early 1967, the College stopped enrolling new students for its degree courses as the first step in the phasing-out programme. The last batch of old degree-course students left at the end of 1969 on graduation. In the meanwhile, the College was progressively moved from its borrowed premises in the Ngee Ann Kongsi building in Singapore city to its new and present campus in Clementi Road, about seven miles from the city. This move was completed in January 1968. Government approval for the new purpose and framework for Ngee Ann was signified in the passage through Parliament of the Ngee Ann College Act in September 1967 which altered the status of the College from a private to a public educational institution. In August 1968 the Act was amended for the College to assume its present name, the Ngee Ann Technical College.

In August 1968 the College enrolled its first students for the technical diploma in mechanical engineering. In March 1969 two more departments – the Electrical Department and Electronics Engineering Department (previously known as the Industrial Electronics Department) and the Commerce Department were established. These three departments now constitute the Ngee Ann Technical College.

Role and Purpose of Higher Education in the Country

Higher education policy is not set solely by the Ministry for Education but by the Minister for Science and Technology, Dr. Toh Chin Chye, in consultation with the Ministers for Finance and Education. This is because Dr. Toh enjoys a unique position as Vice-Chancellor of the largest of the higher educational institutions – the University of Singapore – and is also chairman of the Board of Governors of the next largest, the Singapore Polytechnic. The dependence of all four institutions of higher education on the Ministry of Finance for recurrent support and capital grants brings that particular Ministry into the policy-formulation process, while the needs arising out of school-leavers who wish to pursue higher education (and conversely the requirements of universities in terms of suitably qualified entrants) bring the Ministry of Education into the picture.

The role and purpose of higher education in Singapore were succintly expressed by Dr. Toh in his speech at the University of Singapore Convocation on 12 June 1972:

> . . . the University should serve the interests of the community because the health of the University cannot be separated from the well-being of its society.

> As the welfare of the University could not be separated from the well-being of its society, it was in the interest of the University to see how it could serve the interest of the society.

After describing the various ways in which the public, the University and government bodies worked together, Dr. Toh went on to say:

> . . . it is this tripartite relationship between the University, public bodies and private industry which has made the University conscious of the need to adapt towards Singapore's economic and social requirements. Herein lies the relevance of the University in nation building. I have faith that this relevance will grow, particularly when in the unpredictable years ahead there is need for us to heighten the sense of national purpose.

In his speech, Dr. Toh mentioned the various ways through which the University served the nation. First, there was the provision of manpower. Due to the rapid economic growth of Singapore in the last five years, the development of the Engineering Faculty and the School of Accountancy and Business Administration had become a major preoccupation. Second, there was the research done by members of the University and by the Economic Research Centre. The research results were published in academic papers and books. Third, members of the university staff were acting as consultants to public organizations and private bodies on a diverse range of problems which included the flow of water in reservoirs, the utilization of wood waste and the writing of suitable textbooks for Singapore schools. Fourth, there was the public attendance at courses conducted by the Extra-Mural Studies Department. In 1970 that Department conducted 105 courses which were attended by over 5,000 persons who paid fees to do so.

Although he was referring to the University of Singapore, Dr. Toh's remarks applied to the other institutions of higher education as well. Naturally the University of Singapore, through its large numbers, long tradition and standards of excellence, was able to do the research, consultancy and public teaching (extramural courses) functions more widely than the Polytechnic, Nanyang University and Ngee Ann College. The Polytechnic and Ngee Ann in particular, because they are not full-fledged higher education institutions, would be fulfilling the provisions of manpower functions predominantly.

Coordination of Higher Education Planning with National Economic Planning: University Expansion and National Manpower Needs

The rapid economic growth after 1967 forced the government to accelerate the pace in production of technically-qualified personnel. Before 1968, there was only a vocational institute, teaching a limited number of trades. In addition, there were nine secondary technical schools teaching up to GCE level with emphasis on theoretical instruction rather than workshop practice. In 1969, six new vocational institutes were established and another two since then. Whereas previously the intake of the vocational institute was one or two hundred a year, in 1969 it was increased to 2,151, and by 1972 it has grown to 5,666.[9] Standards

[9] The figures in this paragraph are taken from Dr. Goh Keng Swee's speech on the Outlook

at the secondary technical schools were raised to provide training at Higher School Certificate level. Further, fourteen secondary schools were restructured to provide classes for similar technical education. The enrolment of these twenty-three schools in the technical education stream was 6,974 in 1972.

These changes at the school level would mean that higher education also has to be replanned to provide more engineers and other professional skills. Whereas the changes in the school pattern were prompted by the immediate demand for industrialists, the decision to plan for higher education arose out of a proposal to resite in one new locality the various campuses of the University of Singapore. Studies were made as to what size the University should aim at and to obtain loan funds from the World Bank for the new buildings, and calculations had to be made as to the cost effectiveness of the move.

The British decision to withdraw their armed forces from Singapore made available large tracts of land in the most scenic parts of the island and Kent Ridge was chosen as the site in which the separated faculties of the University of Singapore could be grouped together, with ample space for further expansion. As the ultimate expansion of the University of Singapore would have to depend on the island's needs and the role of Nanyang University, papers were prepared by the Economic Research Centre on Singapore's manpower needs and the enrolments at the University of Singapore and Nanyang University to meet these needs.

Table IV.1 puts up the projected enrolment in the various faculties and schools under two assumptions. Under Assumption One, Singapore University and Nanyang University would grow at the same rate for the faculties in Science, Arts and Social Sciences, Business Administration and Accountancy. The other faculties are for professional degrees for which it is assumed that Nanyang would not offer courses.

Under Assumption Two, the total enrolment under Assumption One is increased by 20 per cent. to account for non-citizens. These non-citizens are then distributed to the various faculties according to present enrolment patterns.

No date was set to the figures but it was taken to be around 1976 by which time it was hoped that the whole University would be located at the new site. As the Singapore economy was growing at a rapid rate, it was felt that projections further into the future was futile. The implications in terms of year-to-year enrolment at the University of Singapore are spelt out in Table IV.2 which shows the numbers of students in each year of study for the various faculties and schools. Except for medicine and architecture, the other courses of study were of four years' duration, some of which (Science, Arts/Social Sciences) had a 3 + 1 arrangement for pass or honours degrees.

When we consider the gap between the 1970 enrolment and the projected targets for some faculties (e.g. Engineering, Science) one sees the merit of the report writers in not specifying a date to the figures in Table IV.1 for enrolment esti-

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for Singapore to the Conference on Business Opportunities in Southeast Asia on 21 November 1972, as published in *The Mirror*, 11 December 1972.

Table IV.1

Enrolment Needed at University of Singapore and Nanyang University to Meet Singapore's Manpower Requirements

	1970 Enrolment			*Enrolment estimates for*					
				Assumption 1			*Assumption 2*		
	Total	*S.U.*	*N.U.*	*Total*	*S.U.*	*N.U.*	*Total*	*S.U.*	*N.U.*
Science	1,505	774	731	2,413	1,241	1,172	2,797	1,437	1,360
Law	340	340	–	251	251	–	413	413	–
Arts/Social sciences	1,624	904	720	2,148	1,196	952	2,393	1,275	1,118
Business administration/ Accountancy	1,476	742	734	1,612	810	802	2,070	1,037	1,033
Medicine	582	582	–	517	517	–	708	708	–
Dentistry	161	161	–	116	116	–	213	213	–
Pharmacy	56	56		72	72	–	100	100	–
Engineering	643	643	–	1,630	1,630	–	1,782	1,782	–
Architecture	124	124	–	162	162	–	212	212	–
Building and estimated manpower	107	107	–	64	64	–	94	94	–
Total	6,618	4,433	2,185	8,985	6,059	2,926	10,782	7,271	3,511

Source: Unpublished paper prepared by the Economic Research Centre

Table IV.2

Enrolment at University of Singapore by Year of Study

	Year 1	*Year 2*	*Year 3*	*Year 4*	*Year 5*	*Total*
Science (1)	423	349	335	134	–	1,241
(2)	490	404	388	155	–	1,437
Law (1)	77	63	58	53	–	251
(2)	128	102	93	90	–	413
Arts/Social sciences (1)	404	333	318	141	–	1,196
(2)	430	355	339	151	–	1,275
Business administration/Accountancy (1)	276	221	210	103	–	810
(2)	355	282	270	130	–	1,037
Medicine (1)	117	107	101	96	96	517
(2)	159	146	139	132	132	708
Dentistry (1)	32	28	28	28	–	116
(2)	60	51	51	51	–	213
Pharmacy (1)	28	22	22	–	–	72
(2)	35	30	27	8	–	100
Engineering (1)	483	397	375	375	–	1,630
(2)	528	434	410	410	–	1,782
Architecture (1)	43	34	29	28	28	162
(2)	56	44	38	37	37	212
Building and Estimated Manpower (1)	18	16	15	15	–	64
(2)	27	23	22	22	–	95
Total (1)	1,901	1,570	1,491	973	124	6,059
(2)	2,268	1,871	1,777	1,186	169	7,271

Source: Same as for Table IV.1
Note: (1) and (2) refer to assumptions 1 and 2.

mates. The large gap in some faculties meant that the targets may not be achievable if there were problems in getting staff or students of sufficient quality. Hence any targetted date may be proved wrong by a few years. For purposes of building a new University of Singapore, however, such a defect was not serious as the intention was to determine the rough size of the building structures needed.

From the enrolment figures, both the University of Singapore and Nanyang University needed to expand by about 70 per cent. In the case of Nanyang University, land is ample for further expansion on the site of the three faculties which made up Nanyang from its inception – Science, Arts/Social Sciences and Commerce. There is no formal published development plan for Nanyang University as much would depend on how generously the public-responds to its funds appeals campaign. The Singapore government would match every dollar raised privately for capital expansion. Although Nanyang University is now 'within' the country's higher education system in that the government has strong representation in its management body and bears the main burden of recurrent costs, its private character is still very much respected. Expansion presents no major problems other than financial, as it will be along the same lines since Nanyang was founded. The difficulty in obtaining teachers fluent in the Chinese medium is being overcome by making students effectively bilingual in Chinese and English so that English medium teachers can also be recruited.

The expansion of the University of Singapore poses more problems, first, because of the physical constraint (teaching is carried on in three different localities) and, second, because of the variety of disciplines involved. Third, the rate of expansion in certain fields of study is expected to be very rapid indeed, and a fourth factor is that as more students switch to English medium education for Singapore as a whole, the demand for more places at the University of Singapore will increase unless Nanyang's attractiveness also increases in spite of its Chinese medium instruction origin. In the 'sixties there was a shift in popularity towards an English-medium education among the Singapore population. A fifth factor is the development of postgraduate education, a natural consequence of the long history of undergraduate education at the University of Singapore.

In the Master Plan for a new Singapore University at Kent Ridge, a projected student population of 10,945 by 1980 was drawn up, made up of 10,900 undergraduates and 855 postgraduates (Table IV.3). In this table, the breakdown by discipline is more specific than in Table IV.1.

The Master Plan figure of 10,945 students by 1980 is 30 per cent. greater than the Economic Research Centre figure of 7,271 which, as stated above, was presumably for 1976. The Master Plan figure can be taken as the upper limit for building a university on the Kent Ridge site for a note in the Plan stated that:

> . . . it may be considered later on whether, after reaching the number of 11,000 students indicated in the present programme, a further increase of students should not be met by starting a new university elsewhere in the future

metropolis of Singapore.[10]

The strong emphasis on professional and technological courses can be seen from Table IV.3. As Nanyang University is not providing such professional courses (except for accountancy, which at the time of writing, still has not been accepted as a registrable qualification) the emphasis is therefore on the University of Singapore to provide the sophisticated high-level manpower needed in further economic development.

Table IV.3

Enrolment at University of Singapore, 1970 and 1980
(Singapore citizens only)

	1970		*1980*	
	Undergraduate	*Postgraduate*	*Undergraduate*	*Postgraduate*
Engineering	470	40	3,480	150
Architecutre	120	10	410	25
Building and estate management	45	–	85	–
Physical science	780	70	2,160	230
Biological sciences	440	30	925	90
Pharmacy	35	10	50	10
Arts/Social sciences	865	80	1,590	160
Accountancy	330	–	410	–
Business administration	250	10	865	110
Law	200	40	330	50
Medicine	395	45	540	110
Dentistry	70	5	170	10
Total[a]	4,000	340	11,015	945
Less Biological sciences	440	30	925	90
Total	3,560	310	10,090	855

[a] The numbers for Biological sciences should not be included in the total university enrolment as students in Biological sciences come from the Science Faculty (Year II), the Medical Faculty (Year III), the Dentistry Faculty (Year II) and the Pharmacy School (Year II).

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[10] *Draft Report on Proposed Master Plan for Singapore University at Kent Ridge*, p. 4.

University Resources Available for Development Planning Purposes

The process of development planning in Singapore is a highly centralized one. Unless university personnel get into the ruling political party and hold public office, it is difficult to see how university resources can directly affect the development planning process.

In a more indirect way, universities can contribute by providing a pool of well-qualified and experienced teaching staff who could also be asked to sit on statutory boards or be consulted on specialized problems in the various government ministries. While the key decisions in development planning are made by a few people, principally those in the government cabinet, the details of execution and implementation are left to the people running the many statutory boards and ministries. The location of new, modernized and functional institutions to tackle the specific needs of growth (EDB, DBS, JTC, etc.) needed the involvement of professional and development-minded people at all ranks and it is here that the universities can provide the most resources towards development planning. Nevertheless, in political participation, the universities have provided people and as the numbers are few, these can be named.

The Minister for Science and Technology, Dr. Toh Chin Chye, was himself Reader in Physiology who resigned from the University of Singapore in 1959 to become Deputy Prime Minister. He returned to the University as Vice-Chancellor in 1968, but kept his seat in the Cabinet. The present Minister for Education Dr. Lee Chiaw Meng, was Senior Lecturer in Engineering at the Singapore Polytechnic in 1968 but resigned to become first Parliamentary Secretary and then, Minister of State for Education. In 1972, he joined the Cabinet as Minister for Education. The Minister for Home Affairs in 1970-2 was Dr. Wong Lin Ken, the Raffles Professor of History at the University of Singapore, and there are several MPs from both Nanyang University and the University of Singapore in Parliament today. A few of them are holding public office, such as Minister of State, Parliamentary Secretary or Political Secretary. When they hold such office full-time, they are paid according to the office they hold but otherwise, the university is the paymaster and allows them the time to spend on public duties as well as keep any allowances or fees due to them. Such close interchange between the universities and the government is necessarily limited to only a few people as there are only sixty-five MPs and even fewer other major public offices to be held.

In considering the broader question of providing a pool of people who can serve in less publicly open positions, the Polytechnic and Ngee Ann College are less favourably placed compared to Singapore and Nanyang Universities. The Polytechnic began ambitiously to provide craft, technical and professional courses. But in the 'sixties, the more qualified of the Polytechnic staff were taken away for professional teaching leading to a degree and were later absorbed by the University of Singapore. In trying to cater mainly for technician training at the diploma level, the Polytechnic found difficulty in recruiting staff who would naturally be attracted to the better prospects in manufacturing industry which expanded rapidly in the late 'sixties. The deteriorating staff position is best shown in the vacancy position in the 1970/71 annual report:

	Establishment[a] *(excluding senior instructors/instructors)*	*Filled*	*Offers Accepted*	*Vacancies*
School of Industrial Technology	114	79	1	34
School of Nautical Studies	8	7	1	-
	122	86	2	34

[a] Senior instructors/instructors are at a lower level than lecturers.

One would therefore expect the Polytechnic to concentrate on securing more people to work for it, full-time or part-time, as its primary obligation is to satisfy the teaching function assigned to it by the government.

Ngee Ann Technical College is now commencing on a five-year development programme. Under the programme, various courses will be revised and improved upon and new courses will also be introduced. It is expected that enrolment in the various courses at the College will increase from the present level of 900 to about 3,000 by the end of 1973. Lecturing/instructing staff would have to be increased from a present total of thirty-four to approximately 150. Fellowships for staff development aimed at improving the knowledge, qualifications and experience of staff members in specialized areas through overseas training and attachment are provided. Hence, for Ngee Ann, as for the Polytechnic, the emphasis is on internal development in order to fulfil its national function better.

Although Nanyang University has not had a smooth history since its founding, it was fortunate that many of its graduates went abroad for further study, partly because the Singapore government in its early years was slow in 'recognizing' its degrees. At the present time, these alumni constitute the bulk of the Nanyang teaching staff which has a fairly even distribution between senior and junior ranks (see Table IV.4).

The usefulness of the Nanyang pool of academics for development planning purposes is diminished somewhat: first, by a certain lack of fluency in English which is the language for business and officialdom in Singapore; and second, by the absence of professional departments of study. The Nanyang curriculum is basically designed to turn out the liberal-trained graduate and in its early days, the American orientation in its credit system was very evident. In contrast, the University of Singapore has a heavy orientation towards professional training in medicine, dentistry, pharmacy, engineering, architecture, building, law and accountancy.

The University of Singapore has the largest pool of academics of the four higher education institutions. This University has the advantage of a long history which began with the Raffles College and the King Edward VII Medical College and due to its use of English, it has been able to obtain qualified staff from the English speaking world to meet its teaching requirements. A breakdown of its teaching staff by rank also shows a fair proportion in senior ranks, some of whom have been tapped to serve on statutory boards and government committees. As many members of the government Cabinet and top rungs of the civil service were from Raffles College, there is a familiarity on the part of the government with the standards of the University of Singapore and the names of its teachers, which is why relatively more of its teaching staff are involved in the development planning process than those of the younger Nanyang University.

When comparing Tables IV.4 and IV.5, one should note that the ranks at Nanyang and Singapore Universities are not comparable with each other – the lecturer grade at the University of Singapore is roughly comparable to both the lecturer and assistant-professor grades at Nanyang University. The University of Singapore had 188 persons of senior-lecturer rank and above compared to seventy-nine persons in Nanyang University of associate-professor rank and above. Consequently the potential exists for a greater involvement on the part of the University of Singapore in the national development planning process.

University Involvement in the Formulation and Implementation of Development Plans

University involvement comes from:

(1) Open participation in political life of the country, such as those who hold government cabinet office or parliamentary seats;

(2) Appointment to statutory boards or committees established by government ministries and committees; and

(3) Secondment on a full-time basis to public service.

In the case of (1), the names of the few people involved have already been cited. In the case of (2), there are larger numbers involved, mainly from the University of Singapore. There are only a few persons involved in (3) who are almost entirely from the University of Singapore.

According to the 1971/72 *Annual Report* of the University of Singapore, seventeen academic staff sit on the following statutory boards of the government:

Science Council of Singapore
Science Centre Board
Engineering Industries Development Agency
National Museum Board
Engineering Industries Development Agency
National Museum Board
Post Office Savings Bank

Table IV.4

Teaching Staff by Ranks in Nanyang University, 1970

	Professor	*Associate Professor*	*Assistant Professor*	*Lecturer*
College of Arts				
Department of Chinese Language and Literature	2	5	5	5
Department of Malay Studies	2	1	2	-
Department of History	1	3	1	5
Department of Geography	1	4	1	4
Department of Government and Public Administration	3	1	2	5
College of Science				
Department of Mathematics	1	9	3	2
Department of Physics	3	11	2	2
Department of Chemistry	1	9	3	3
Department of Biology	2	6	4	1
College of Commerce				
Department of Industrial and Business Management	1	2	1	5
Department of Accountancy	1	2	1	5
Department of Economics	2	3	1	3
Language Centre	1 (director)	2	1	11
	21	58	27	51

Source: *Nanyang University Calendar,* 1970/71
Note: Visiting professors are excluded.

Table IV.5

Teaching Staff by Rank in Singapore University, 1972

	Professor	*Associate professor*	*Senior Lecturer*	*Lecturer*
Faculty of Architecture				
Architecture	2	1	4	4
Building & estate management	-	2	5	-
Building science	1	2	2	-
Faculty of Arts & Social Science				
Chinese Studies	1	1	-	2
Economics	2	-	4	11
English	-	1	2	3
Geography	1	1	6	-
History	1	1	3	4
Malay Studies	1	-	-	1
Philosophy	-	-	1	4
Political Science	1	-	-	4
Social Work	-	-	1	2
Sociology	1	1	-	7
Faculty of Dentistry				
Operative Dentistry	-	-	3	4
Oral Surgery	-	1	2	1
Prosthetic Dentistry	1	2	2	1
Faculty of Engineering				
Civil Eng. & Eng. An.	1	2	-	9
Electrical Eng. & Electronics Eng.	2	-	2	14
Mechanical Eng. & Production Eng.	3	3	3	18
Systems Eng.	-	-	-	1
Faculty of Law	1	1	6	12
Faculty of Medicine				
Anatomy	1	3	2	4
Bacteriology	1	-	3	-
Biochemistry	1	1	1	6
Medicine	2	4	4	5
Obstetrics & Gynaecology	1	2	1	7
Orthopaedic Surgery	-	-	2	3
Paediatrics	1	3	2	1
Parasitology	1	-	1	2

Pathology	1	1	1	4
Pharmacology	1	1	1	3
Physiology	1	2	5	-
Social Medicine	1	1	4	2
Surgery	-	1	3	3
Faculty of Science				
Botany	1	1	2	4
Chemistry	1	2	4	13
Mathematics	1	1	2	12
Physics	1	2	2	10
Zoology	2	1	8	-
School of Accountancy & Business Administration				
Accountancy	-	-	4	4
Business Administration	1	-	-	9
School of Pharmacy	1	-	5	3
Language Centre	-	-	1 (Director)	4
Total	39	45	104	201

Source: University of Singapore, *General Information,* 1972/73.

Note: Not included are:

(a) The Economic Research Centre with one Director, one Deputy Director, three Assistant Directors and four Research Fellows, and

(b) The Extra-mural Studies Department with one Director and one Assistant Director.

National Library Board
Family Planning and Population Board
Adult Education Board
Port of Singapore Authority
Jurong Town Corporation
Public Utilities Board
National Stadium Corporation
National Statistical Commission of Singapore

Some of the seventeen sit on two or more boards. The University is also represented on professional and advisory boards or committees set up by ministries, as follows:

Committee on Malay Language and Literature, Ministry of Education
Committee on the Training of Foreign Service Officers, Ministry of Foreign Affairs
Singapore Board of Legal Education
National Survey of Scientists Committee, Ministry of Science and Technology
Advisory Committee on Film Classification, Ministry of Culture
Standing Committee on History, Ministry of Education
National Archives and Records Centre Committee
Professional Engineers Board
Industrial Arbitration Court
Liquors Licensing Board
Committee of Enquiry (Disciplinary Proceedings) Public Service Commission
Nursing Education Committee
Medical Council, Ministry of Health
Board of Architects
National Wages Council
Preservation of Monuments Board
Specialist Committee on Cardiac Surgery, Ministry of Health
Income Tax Board of Review, Ministry of Finance
Standing Committee on English Syllabus, Ministry of Education
Enlistment Board, Ministry of Defence
Ministry of Home Affairs Committee on Rehabilitation of Police Detainees
Ministry of Health Medical Research Council
Board of Commissioners of Currency

If we add on those serving in charitable organizations, public institutions and other bodies, there is a total of 140 teaching staff of the University of Singapore who are active in one way or another in the community life of the Republic. This is a high proportion, though not unexpected, as public service is one of the criteria for promotion through the ranks of the University.

The persons, from various disciplines, who have been seconded full-time to public service have become ambassadors (six), or senior officers in ministries and statutory boards (three). Three are currently serving in public service while the other three are back in the University of Singapore, undoubtedly intellectually enriched by their experience. One staff member from Nanyang, the only one so far, is currently serving as ambassador. Of those seconded, only one went to the Economic Planning Unit (for a year).

A new type of attachment to public service is being tried out now. A staff member from the Economic Research Centre spent three afternoons a week at the Ministry of Finance in 1971-2 but terminated this consultancy when he resigned from the University. Presently a staff member from the Economics Department is spending a full day each week at the Ministry of Finance providing consultancy services on an economic model of Singapore.

Appointment to committees sometimes involves the person being in close contact with the working of a ministry, to the extent of being physically present for a few days each week for the period that the committee is working. This was the experience of a professor of economics who chaired a commission of enquiry into statistical activities in Singapore. Another professor of economics chaired the National Wages Council in 1972.

Types of Contribution the University Could Make Towards Development Planning

In the 'seventies the greatest role for the universities in Singapore would be the provision of high-level manpower. Partly this is because of the need to move Singapore into a strong position to provide services to the region and for her own business needs. As mentioned earlier, Singapore in the 'sixties had unused land and unemployed labour to attract capital but now these resources are no longer as 'cheap' as they once were. Singapore would have to provide another resource in abundance with which to sustain economic growth. In a competitive world, relative efficiency as a production, servicing and communications centre counts most and such relative efficiency depends on Singapore being one step ahead of other countries in the types of resources she possesses. Singapore cannot hope to have much more land and even if she allows a free inflow of workers from other countries, she does not have the space to provide the necessary accompanying infrastructure (housing, social facilities) for a large foreign labour force. There is one type of resource the neighbouring countries do not have and this is skilled and high-level manpower.

The four higher education institutions complement one another in the provision of skilled and high-level manpower. Nanyang and Singapore Universities award degrees and cater for Chinese-speaking and English-speaking school-leavers respectively. Nanyang offers a rounded education in science, arts and commerce while the University of Singapore provides a larger variety of courses, many of which lead to professional qualifications. Both Ngee Ann and the Polytechnic are diploma-awarding institutions along technical engineering lines. Ngee Ann also has a commerce department. One caters principally for the Chinese-speaking and the other for the English-speaking school-leaving population. Both Nanyang and Ngee Ann serve the additional function of providing higher education for the school-leavers from Chinese schools in West Malaysia as there is no tertiary education institution catering for such persons in Malaysia. The certificates awarded by Nanyang and Ngee Ann are not yet officially 'recognized' by the government of Malaysia and those who cannot secure private employment there usually remain in Singapore.

All four institutions taken together (see Table IV.6) have a predominance of students in engineering, commerce, accountancy or business administration. This 'business' orientation of all four institutions is very much in line with the Singapore government policy that there should not be graduates unemployed simply because of the subjects they have studied. Hence the bulk of instruction is in subjects which have a 'business' usefulness. The availability of places in these subjects, or to put it in another way, the non-availability of other courses of study, plus encouragement through official pronouncement and other means, has led to a student concentration in engineering and business courses.

Of the 10,000 students in all the four institutions, 37 per cent. were in engineering/technical courses and another 20 per cent. in business administration, accountancy and commerce courses. The proportions are even higher when we consider only first-year students as these reflect current educational policy. Of the 4,000 first year students, 45 per cent. were in engineering/technical courses and 21 per cent. in business administration, accountancy and commerce courses. There are roughly six students in the first year of technician diploma courses to every student in the first year of an engineering degree course, as this is the technician:engineer ratio being observed in manpower planning.

The provision of skilled and high-level manpower is therefore not a haphazard expanded supply but is based on projected industrial and commercial requirements in the next decade. The basis for the Economic Research Centre estimates (which in turn laid the basis for the University of Singapore Master Plan figures) is not made clear but my impression is that the planners expect a steady rate of GNP growth from which larger manpower requirements will arise and secondly, the very availability of skilled and high-level manpower will attract new industries and the expansion of existing ones.

The second role which the university can play is the participation of its teaching personnel in public management and policy formulation. In the previous section, it was noted that current involvement in development planning and operation is largely limited to the University of Singapore. Although Nanyang University was founded in 1958, it was only recently reorganized with a new degree structure, salary structure and constitution which made it an integral part of the state higher education system. The Singapore Polytechnic too had seen many changes and it is now being given a new lease of life through a new site and new orientation towards technician diploma instruction. Similarly too, the history of Ngee Ann as described above, reveals that it is just now embarking on a new phase of its existence. As time goes on, Nanyang, Ngee Ann and the Polytechnic will definitely supplement the University of Singapore in providing the pool of qualified academics who can serve in statutory boards, government committees and other honorary posts. Although no details are available of the present-day participation of the staff of these three institutions, it should not be thought

Table IV.6

Student Enrolment (Full-Time Undergraduates) in Singapore Higher Education Institutions by Course and Year of Study, 1971/72

	Year I	*Year II*	*Year III*	*Year IV*	*Year V*	*All Years*
Polytechnic						
Architecture[a]	-	-	-	-	2	2
Civil Engineering	78	41	21	-	-	140
Electrical Engineering	352	26	27	-	-	53
Production Engineering		35	42	-	-	77
Mechanical Engineering		105	123	-	-	580
Electronic Engineering		110	86	-	-	196
Marine Engineering	86	70	-	-	-	156
Rubber & Plastics	33	25	23	-	-	81
Building	80	39	29	-	-	148
Indust. Techn. Cert. Course	532	311	5	-	-	848
Tech. Draughtmanship Cert.	117	-	-	-	-	117
Sub-total	1,278	762	356	-	2	2,398
Ngee Ann						
Mechan. Engineering	234	[illegible]6	57	-	-	487
Elect. & Electronic Eng.	131	[illegible]12	48	-	-	291
Commerce	224	128	86	-	-	438
Sub-total	589	436	191	-	-	1,216
Nanyang						
College of Arts	229	214	209	67	-	719
College of Science	199	154	244	62	-	659
College of Commerce	291	233	263	36	-	823
Sub-total	719	601	716	165	-	2,201
Singapore University						
Arts. & Social Science	253	230	251	-	-	734
Science	156	159	200	114	-	629
Law	103	80	84	75	-	342
Medicine	119	110	97	117	140	583
Dentistry	38	38	34	40	-	150
Pharmacy	23	21	2	8	-	54
Business Administration	166	117	76	-	-	359
Accountancy	148	150	112	-	-	410
Architecture	40	37	29	30	7	143
Building & Estate Management	24	32	18	11	-	85
Engineering	273	309	115	91	-	788
Sub-total	1,343	1,283	1,018	486	147	4,277
Total	3,929	3,082	2,281	651	149	10,092

Source: *Annual Reports* of the respective institutions

[a] These are the last students in this course at the Polytechnic.

that there are no persons from these institutions who are participating. There are now a few staff members of Nanyang University who are members of parliament, one of whom resigned from his post as Bursar in order to become the Minister of State for Education.

There are several reasons why I believe this is going to be an important role for the four institutions. First, these are now integral parts of the state education system, being almost fully supported by government annual grants for recurrent costs (tuition fees cover only a small fraction – one-sixth – of the annual cost). The staff of these institutions are expected to perform a certain amount of public service if they want to secure promotion and this aspect is reinforced by the fact that the heads of three institutions are cabinet ministers. Dr. Toh Chin Chye, the Vice-Chancellor of Singapore University and chairman of the Board of Governors of the Singapore Polytechnic is Minister for Science and Technology while Dr. Lee Chiaw Meng, the acting principal of Ngee Ann College, is Minister for Education. Second, the development planning process requires a strong role by the government in breaking ground on new areas and keeping a watchful eye on others. We have seen that Singapore's economics growth in the 'sixties was due to the creation of new public institutions (HDB, EDB, PUB, followed by DBS, JTC, Intraco, etc.), control over land and labour provision, the encouragement of savings through the CPF and industrial peace through a strong NTUC. The key decisions were made by a small group of people, the senior cabinet ministers, but their implementation and execution required a large number to sit on boards and committees. Civil servants would be already hard-pressed and at present they are being made to sit on boards of companies in which the government has a financial share. Next to the civil service, the four higher education institutions have the largest pool of postgraduates and professional people in the Republic and no better use can be put of this talent than to tap it to assist the government in its many agencies, boards and committees on a part-time or honorary basis. Third, the four institutions have a high engineering business teaching bias, and this type of inclination is absent from the civil service which is oriented towards general issues of law and order. As Singapore moves towards a high degree of professional servicing and technological expertise, the government will have a greater need for engineers, accountants and managers who think in terms of the public interest and not merely in terms of business profits or technical sophistry. Outside the commercial sector, the four tertiary education institutions have the greatest pool of well-trained engineers, accountants and others inclined towards the commercial field.

A third type of contribution is consultancy services to the private sector Hitherto, this has been relatively unexplored because the teaching staff, though academically well-qualified, are inexperienced in applied problems and commercial requirements. The teaching staff have however been brought into contact with governmental problems which bring in an air of realism and urgency into the thinking of academics. It is now much easier for academics to see the problems faced by the private sector after having had the advantage of seeing problems from the national or government viewpoint. I am referring, of course, only to those academics who have sat on boards, committees or served full-time in the government. Provided academic salaries are kept reasonably high, I do not see any danger of academics leaving for the business world on a large scale as they would prefer to enjoy the best of both worlds by doing some consulting in industry. At present, the University of Singapore permits academic staff to retain earnings from outside sources up to 60 per cent. of their annual university salary. As this is quite a high ceiling, the only problem now is for academics and the business world to get together on areas where their interest converge. This matter has relevance for development planning in that the activities of the private sector are assisted by the activities of the government in higher education.

A fourth type of contribution I envisage is non-economic in nature but nonetheless important for the smooth development of the economy. I have earlier mentioned that in the 'seventies, political stability can be expected to continue but new forms of unrest among the young generation, young adults, and the old, each facing its own problems, will arise. Hence a vital rôle for the university is to produce leaders and conciliators for the tensions created by a rapidly growing metropolis.

This need has not been felt in the development planning of other countries because the low incomes did not create such problems. Singapore is however different from other countries in that she has already reached the US$1,000 per capita level and is a relatively developed 'developing' country. Her desire to continue economic growth is more to safeguard her political integrity as she is but a small country. Rapid growth in a small urban environment can create social, psychological and even internal political tensions.

The university community of teachers, students and administrators will definitely be affected by such tensions but being a university, the capacity to resolve these tensions is there. The young people can be given a chance to be heard without disrupting the daily programme of activities, the needs of the old can be catered for and those seeking employment can be adequately prepared for what lies ahead. There is clearly great scope for experimentation and innovation on how to cope with the problems of further economic growth.

In other countries, the university community is inevitably divorced from the tensions of daily living because of the large expanse of space in the country. Due not only to the lack of space in Singapore but also to the close connections with government, the tensions felt in the four tertiary education institutions will reflect the tensions felt in the development planning of Singapore. By providing solutions to their own problems, the four institutions would be showing to the rest of the country how national problems can be solved.

Factors Preventing a Closer Cooperation Between the University and the Government

Once again Singapore is different from other countries in that there already exists so close an administrative relationship between the government and the four tertiary education institutions that this may in fact stifle future close cooperation. For true cooperation to exist, both parties must have a certain degree of respect for each other so that there is a momentum and an imagination behind what each side may want to do.

In the political turbulence of the 'sixties, it was only to be expected that the government would want to take effective control of tertiary education institutions as these form the apex of the whole educational structure and contain the largest pool of well-qualified people. Such control has been obtained and now all four institutions are fulfilling well their assigned roles as providers of professional and educated manpower.

Thus far, the staff of the institutions are not treated simply as civil servants nor are the students as mere schoolchildren. The government has not overreached itself in its control of the institutions. However, it requires a constant reminder to all parties concerned that the institutions must not degenerate into another government for it is from the graduates of tertiary institutions that the future leadership of Singapore will merge. Each of the four institutions must develop around itself an alumni, a core of well-wishers and a tradition of independent enquiry from which its special contribution to the life of the nation can flower.

The spirit behind each of the four institutions can and should come from those in the universities who have entered public service and/or political life. These persons would appreciate the problems the Singapore government faces, especially that of national survival in a very uncertain Southeast Asia and, at the same time, they also know what life in the universities is all about. Only in this way can creative tension between the government and universities lead to a fruitful cooperation.

SECTION V

CONCLUSIONS

Singapore has grown in the 'sixties, particularly in the last five years. It has a healthy and youthful population and has sustained the trauma of first joining and then separating from Malaysia. Singapore has been able to succeed despite changing external circumstances by providing the benefits of a strategic location in an urban setting without the attendant disadvantages.

In a small place like Singapore, the two serious disadvantages that could arise are the high cost of land and the non-availability of labour of the appropriate types for modern industry and commercial services. The cost of land enters into production cost in two ways: directly, as cost of the land and premises needed for production, and indirectly, as cost of housing for the working population. By acquiring land and developing it into industrial and housing estates, the government has eliminated what would have been a rising cost item for businesses. Similarly, in the case of labour, when the industrial expansion from 1966 onwards led to a technical labour shortage bottleneck, the government adopted an open-door policy by freely issuing work permits to foreigners. The government has also opened the doors to foreign capital and technology from 1968 onwards, thus minimizing the cost to local industrialists who wanted to participate in joint ventures. A start was made in 1960 to minimize labour cost through the establishment of an Industrial Arbitration Court and a National Trade Union Congress to mobilize trade unions in support of the government's economic policies. In 1968 the controversial Employment Act was enacted to assure business management that labour would not stand in the way of greater profits.

Parallel to these measures of stabilizing labour and land costs, the government has sought to maximize the location advantages of Singapore by adding more to the advantages which an urban setting already offers. The provision of utilities and public services is assured through the efficient functioning of statutory boards like the PUB, PSA (Port of Singapore Authority), STB (Singapore Telephone Board) and HDB. The government has also created new institutions, particularly the EDB, to centralize the provision of the facilities and incentives which the government is offering to the industrialist, but at the same time the government does not hesitate to restructure certain functions (for example, of the EDB to the DBS and JTC in 1968) in the interest of greater efficiency. Through the Central Provident Fund, the government maximizes domestic savings for use in development projects while at the same time restraining consumer demand pressures which might lead to inflation.

These measures in the domestic scene were sustained over the whole of the 1960's because of the PAP's victories in all the general elections. Without this record of domestic political stability, these long-term planning measures would not have succeeded, neither would have the construction and land development programmes which the government undertook to sustain capital formation. Building and construction itself consume time and is also invaluable in absorbing labour so as to hold back the unemployment rate.

While consistency and planning characterized domestic policy, external policy had to be more flexible because of rapidly changing external circumstances. Singapore at first attracted industrialists, though only slowly, because of the promise of a Malaysian (including Singapore) common market. When that did not materialize, and when furthermore Singapore was separated from Malaysia in 1965, foreign policy quickly changed to seek to put Singapore on the world map as a global city with the world as the market for her goods and services. Not only was an opendoor policy for foreign labour and capital adopted, but a Singapore dollar currency was also issued and the government responded to the withdrawal of the British armed forces by building up its own local defence capability. Each external problem was converted into an opportunity to advance the interests of this new island country, not simply in the region but more importantly among the world community of advanced nations. Singapore was able to do this partly because of the rapid growth of communications and transport, and partly because her rising income levels and intermediary role with her neighbours gave her a key advantage.

In retrospect, both the domestic and foreign policies were, even in the days when Singapore was under British jurisdiction, directed at the self-advancement of the island as a state. The leaders who came to power in the 1959 general elections were an exceptionally vigorous and dynamic group who first sought to advance Singapore's interests by getting into Malaysia. There was domestic opposition to this move but as this was largely communist-inspired, it failed to hold back the PAP. When Singapore was forced to separate from Malaysia, the same group of leaders sought to place Singapore on the world map. There was always this political drive towards the development planning of Singapore, not political in the partisan sense as used in Western democracies, but circumscribing the whole of the island state with its population of two million.

As a result, key planning decisions were made by the government Cabinet or an inner circle comprising the Prime Minister and the few senior ministers. The Economic Planning Unit merely serviced the evaluation of development projects that had to be financed by the Development Fund. The only plan that was published was the State Development Plan of 1961-4 and although a Second Five-Year Plan for 1966-70 was prepared external events rapidly overtook its premises and rendered its publication untenable. Nevertheless, up to the end of the 'sixties, one could detect the five-year framework in which projects were presented for annual parliamentary approval. Since 1970, however, even this medium-term perspective has been omitted. One can, however, deduce from the currency issue system and the amounts raised by the CPF that development expenditure is still financed by real domestic savings. Under the currency board arrangement, the monetary authority cannot lend to the fiscal authority which therefore has to depend on taxes and loans from the private sector to pay for all expenditure. The

CPF was the main purchaser of government loan securities.

The object of development expenditure was to maximize the efficiency of the urban setting through planned infrastructure improvements. By raising the level of capital formation, domestic savings which would otherwise have gone abroad were productively utilized domestically. The small size of Singapore permitted the various aspects of infrastructure development to support each other in maximizing the total efficiency of production which the government further reinforced by pioneer tax legislation, strict labour laws, domestic political stability and an astute foreign policy. In the Singapore context, development planning is therefore far more than just writing up a plan document and spending money. Development planning amounted to national society planning, from education to economics.

The tertiary education institutions, for instance, were gradually brought into the ambit of state education, if they were not already in. Nanyang University and Ngee Ann College were originally started by private initiative to remedy the neglect of Chinese school-leavers by the British colonial administration. Reports of various committees led to the reorganization of both these institutions so that together with the University of Singapore and Singapore Polytechnic, they catered for all the needs of Singapore society. Nanyang and Ngee Ann are now bilingual in instruction, the former awarding degrees for a liberal education and the latter, diplomas for engineering and commerce. They thus complement the University of Singapore which awards degrees for all kinds of study, the bulk of which lead to professional qualifications, and the Singapore Polytechnic which awards technician diplomas. All four institutions together have about 10,000 full-time students, more than half of which are pursuing engineering/technical, management and accountancy courses.

The tertiary education institutions are consequently highly business-oriented in the sense that their graduates can obtain jobs because of the qualifications they hold. This characteristic of higher education underlies the government philosophy that such institutions should provide skilled and high-level manpower. On the one hand, further economic growth would require such types of manpower and on the other hand, the availability of such manpower would attract industry or the expansion of existing industry. Continued economic growth is desired not only to raise the livelihood of people but also to ensure the political viability of Singapore as the youngest and smallest independent country in Southeast Asia.

Development planning has enabled Singapore to respond quickly and effectively to changing situations. In the past, the tools which the planners could employ centred around land use and labour supply. In the future, these two resources will not be so abundant. It is necessary for Singapore to develop a valuable resource in excess so that she can deploy it effectively in adverse circumstances. This resource has to be skilled and high-level manpower.

The tertiary education institutions contribute to development planning in the provision of such manpower. They also contribute more directly when their teaching staff enter political life and serve as government ministers. More possible, and this is found largely among University of Singapore staff, is membership of statutory boards, committees and agencies of the government. A large number of positions at this level of interpreting and implementing policy have to be filled. The key decisions in Singapore are made by a few people, principally the senior cabinet ministers. However, the tasks of interpretation, implementation and operation are left to a large number of other persons, drawn from the civil service, academia, business and the professions who are sympathetic to the government's objectives and possess experience and/or competent knowledge. In this way, centralized decision-making and efficiency in operation are simultaneously achieved. In other countries, the more centralized is decision-making, the less efficient are operations, but happily, because of her small size, the two can meet in Singapore.

Her longer tradition, larger size and the variety of fields of study make the University of Singapore the pre-eminent contributor in this respect, as evidenced by the large number of its staff who sit on public boards or committees. Although Nanyang and the Singapore Polytechnic have a fourteen-year history, they have only recently reorganized themselves to play the roles assigned to them in the production of professional and technical manpower. Ngee Ann too has only recently found a new footing as a technical college. Nanyang, the Polytechnic and Ngee Ann are presently concentrating on fulfilling their teaching functions but in due course of time, they will undoubtedly join the University of Singapore in contributing to the pool of people who can be tapped by the government to serve on boards and committees. Currently, a few staff members from these institutions are serving in this capacity already.

The University of Singapore is also contributing through the full-time secondment of staff to serve as ambassadors or senior officers in ministries. There has also been secondment to serve as full-time politicians, one as a cabinet minister, one as a minister of state and one as parliamentary secretary. Next to the civil service, the four institutions possess the largest pool of experienced and academically qualified people who can look at national problems from the public perspective. Such a public service orientation is encouraged by the presence of cabinet ministers as the chief executives of three of the institutions.

Another role for the four institutions is to assist the private sector through research and consulting. Unlike public service, this role has not been tapped enough because of the youthful professional and business orientation in these institutions. However, this youthfulness will be overcome in the process of time and as the pool of staff members grows bigger, business will be eager to tap the talents available, especially those who have had public service experience.

Another important role of the tertiary education institutions relates to its community life and the way the problems of rapid economic growth appear and are solved in the tertiary education institutions. As she is already a higher-income country, Singapore will face social and psychological problems from further growth especially since she is already an urban metropolis. Insofar as a tertiary institution is a microcosm of society's problems, the nation can learn from the experiences of tertiary education institutions.

An active role by the four institutions presupposes that they have nerve and vitality of their own. However, in a small country like Singapore, the strength of the government to bring them under its fold may, as the saying goes, throw away the baby and the bathtub. It is important that each of the institutions develop its alumni, tradition and well-wishers so that each can forge its unique contribution towards development planning. The contribution of those who have served both in the university and in public service is therefore vital in this respect for they would be able to see problems from both sides of the fence.

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Part 2

MALAYSIA

DAVID LIM

SECTION I

HISTORICAL BACKGROUND

Social and Economic Development since 1957

West Malaysia obtained her independence in 1957 and it would be appropriate to begin the assessment of her social and economic development with this year, as the orientations of the colonial and the newly-independent governments are quite different.

In the colonial era West Malaysia specialized in the production and processing of rubber and tin for export in return for the import of essential goods and manufactured goods. This pattern of production, often called the classical export production pattern, brought about a standard of living which was among the highest in Asia. International trade became more than a device for the optimum allocation of given resources. It was also able to transmit the process of economic growth from the Western industrial economies to the peripheral areas for such was the power of the Robertsonian 'engine of growth'.

The relatively high standards of living in Malaysia can be seen whether the index of comparison used is the conventional income per head expressed in a common currency through the use of official exchange rates, the Bennett approach of using non-monetary indicators[1] or the Beckerman and Bacon synthesis of the previous two methods.[2] Thus in a study of nine South and Southeastern Asian countries over the period 1954-6 Myrdal discovered the per capita income of West Malaysia was 995 Indian rupees, which was nearly 29 per cent. higher than that of the Philippines, the next ranking country.[3] In the same study it was also discovered that data on such non-monetary indicators as the number of calories or proteins consumed, the number of physicians, radios and telephones available and the amount of energy utilized, calculated on a per capita basis, show that West Malaysia again headed the ranking list.[4]

The above two methods of comparing the income levels of different countries are subject to a number of conceptual and practical weaknessess.[5] Beckerman and Bacon have synthesized the two methods to produce the so-called 'modified non-monetary indicator' system of comparison. This method has resulted in different rankings for certain countries but for the group of nine South and Southeast Asian countries the Beckerman and Bacon index of real consumption again placed West Malaysia at the top of the list for 1960.

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[1] M.R. Bennett, 'International Disparities in Consumption Levels', *American Economic Review* (September 1951).

[2] W. Beckerman and R. Bacon, 'International Comparisons of Income Levels: a Suggested New Measure', *Economic Journal* (September 1966).

[3] The countries are Pakistan, India, Indonesia, Burma, South Vietnam, Philippines, Thailand, Ceylon and West Malaysia. See G. Myrdal, *Asian Drama: An Inquiry into the Poverty of Nations*, London, Allen Lane, 1968, p. 477.

[4] *Ibid.*, pp. 540-1.

[5] W. Beckerman, *International Comparisons of Real Incomes*, Paris, OECD, 1966.

Development through trade had thus succeeded in giving West Malaysia one of the highest standards of living in Asia. The effect that such a strategy of development had on the economic structure of the West Malaysian economy can be seen from the fact that in 1957 the primary sector, basically rubber and tin, accounted for over 45 per cent. of the GDP. The tertiary sector, which consisted mainly of supporting activities for the primary sector, accounted for about 44 per cent. while manufacturing activities made up the other 11 per cent. In the same year gross export proceeds constituted nearly 47 per cent. of the GDP, indicating a large export sector which in turn was dominated by the rubber and the tin industries. Earnings from these two commodities accounted for 85 per cent. of the gross export proceeds or 40 per cent. of the GDP.

The composition of the West Malaysian imports also demonstrates the essential nature of the economy. In 1955 consumer goods accounted for 66 per cent. of the total imports while capital goods accounted for only 8 per cent. The overall picture then of West Malaysia before 1957 is of a highly trade-oriented economy exporting mainly rubber and tin in exchange for essential foods and manufactured goods.

The role of the Colonial Government was concentrated on the provision of infrastructural facilities and the maintenance of law and order. These were conducted within the framework of a balanced budget and a Currency Board System whose overriding principle was the pursuit of conservative policies to maintain internal and external stability.

The aims of the West Malaysian government and therefore its role underwent considerable changes after the attainment of independence. This was purely a function of political necessity for the government of a newly-independent country has to redress imbalances created by the colonial government if it wants to maintain the support of the electorate. To be more specific, newly-independent underdeveloped countries often inherit dual economies, with the high productivity export sector, usually largely foreign-owned or controlled, on the one hand and the low productivity subsistence sector on the other. There are political pressures to devote more time and effort to the subsistence peasant sector. In this respect West Malaysia is no exception for its advanced rubber and tin sectors operated side by side with the traditional low-productivity subsistence sector of rice, coconut, rubber and fishing activities. West Malaysia is only unique because of the alignment of economic and political interests so that programmes to change the colonial export pattern of production were formulated and implemented rapidly.

This alignment is the result of two factors. In the first place, the subsistence peasant sector is populated mainly by Malays. If the rural population is defined as those people living in communities of less than a thousand inhabitants, then in 1957 Malays accounted for about 70 per cent. of it. The predominance of the

Malays in the rural sector can also be shown by the fact that the increase of 3,000 in the rural population over the period 1947-57 was made up of an increase of 368,000 Malays and a decrease of 365,000 non-Malays.

In the second place, the Malays are the politically dominant group in the country. This in itself is the result of the demographic distribution of the ethnic groups and a weighting system in the allocation of seats which favours the rural areas. The Malay voting power is scattered widely throughout the country and the Malays form over 50 per cent. of the electorate in fifty-nine of the 104 constituencies. The Chinese voters are concentrated in urban areas on the western flank of the country and consequently form more than 50 per cent. of the electorate in only thirty-two constituencies. This concentration of the Chinese in the urban areas and the adoption of a weighting system that favours the less densely populated rural areas have given the scattered Malay community a disproportionately large number of seats in relation to their percentage in the total electorate.[6] Thus in the 1959 General Elections the Malays formed 51 per cent. of the population but 56 per cent. of the electorate and they had 63 per cent. of the parliamentary seats.

The combination of economic backwardness and political power has produced very strong political pressures to develop the subsistence agricultural sector. At the same time there have been economic and social reasons for changing the existing pattern of production. The growth of the classical export economy depends, first, on a buoyant world demand for its produce and, second, on an abundance of those factors of production which are utilized in the production of the export commodities. Where neither determinant of growth is present, then there is a need to diversify the economy. Ever since the introduction of the family of synthetics called 'stereo-regular' in 1961 the natural rubber industry has had little significant technical advantages over alternative synthetic materials and its future prospects have become rather bleak so that further reliance on it as a source of economic growth is no longer warranted.[7] On the other hand, tin, the other bulwark of the West Malaysian economy, has no problems relating to demand. The difficulty lies in the rapid depletion of known tin deposits. Thus as far as West Malaysia is concerned there has been a need to look for other sources of economic growth.

The social pressures for changing the classical export pattern of production came in the form of a rising level of unemployment. In 1957 the population was growing at a rate of 3.4 per cent., which was one of the highest recorded rates of natural increase in the world. In the first half of the twentieth century the birth rate in West Malaysia rose very rapidly as the predominance of males in the classical colonial demographic structure became less marked and the sex-ratio more balanced.[8] The demographic stabilization was due partly to the passage of time which led to the maturation and therefore the reproduction of the children born in West Malaysia in the early years of the century. As the probability of having a male child is almost the same as that of having a female child, this resulted in a more stable society by the 1940's. The repatriation of some workers to China and India during the Great Depression period and the encouragement given by the colonial authorities to Chinese females to join their husbands in West Malaysia also helped to produce a more even sex-ratio and therefore a higher birth rate.

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[6] T. McGee, 'The Malayan Election of 1959: a Study in Political Geography', *Journal of Tropical Geography* (October 1962).

[7] T.R. McHale, *Rubber and the Malaysian Economy*, Kuala Lumpur, M.P.H. Publications, 1966.

The rubber and the tin industries were able to absorb the initial increases to the labour force. However, as with first the decline in the price of rubber and second the depletion in the known deposits of tin, the two industries found it increasingly difficult to maintain their traditional role as the main source of employment. The level of unemployment began to rise and the ensuing political and social pressures became another factor calling for change in the colonial pattern of production.

Three reasons can therefore be identified for the programme to reduce the dependence on the rubber and the tin industries. These are the decline in the prospects for rubber and tin, political pressures to develop the rural sector in order to bring about a more equitable distribution of income and wealth and social pressures to reduce the level of unemployment. Much of the social and economic development in West Malaysia over the last decade or so can be explained within the framework provided by these three factors. Thus the decline in the prospects for the two traditional export commodities has resulted in a move to diversify the productive base of the country. At one level it has led to the establishment of a manufacturing sector which caters primarily for the domestic market. In 1957 the manufacturing sector consisted largely of the processing of estate-type agricultural products in factories off estates and wood and rattan products, and it accounted for less than 8 per cent. of the GDP. By 1970 its share in the GDP had increased to over 13 per cent. and newer industries such as the chemical products, printing and publishing and non-metallic mineral products industries were beginning to play a more important part.

At another level the diversification programme has resulted in significant changes within the agricultural sector. The rubber industry itself has introduced higher-yielding clones and new processing techniques. The first variety of high-yielding clones was introduced before the Second World War and its yield per tapped acre on the estates today is around 650 lb., as compared to the 300 lb. per tapped acre that can be expected from unselected seedlings. The second variety was introduced after the Second World War and is in its prime today with a yield of around 1,100 lb. per tapped acre on the estates. The latest variety, selected after an intensive research programme over the last twenty years, is now being planted on a wide scale in West Malaysia. In the estates where these trees have matured, yields varying between 2,500 and 3,000 lb. per acre have been obtained. In 1957 the share of the estate acreage tapped under the post-war high-yielding seeds was only about 7 per cent. but by 1970 it had increased to over 85 per cent.

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[8] T.E. Smith, *Population Growth in Malaya*, New Jersey, Princeton University Press, 1952.

The quality and the packaging of natural rubber have also worked to its disadvantage. The bulk of natural rubber exported used to be in the form of ribbed smoked sheets packed in 250 lb. 'bare backed' bales. The sheets were graded visually from 1 to 6 but the grading had always been unsatisfactory. The bales were also often badly packed and difficult to handle. The rubber industry in conjunction with the government started introducing new processing techniques in 1960 which produce 'block rubbers' of homogeneous quality. This development together with the introduction of the 'Standard Malaysian Rubber' grading scheme have eliminated to a certain extent some of the non-technical advantages held by synthetic rubber.

Another consequence of the agricultural diversification programme is the tremendous increase in the production of palm oil in West Malaysia. Commercial cultivation of oil palm took place as long ago as 1922 but it was not until the late 1950's that concentrated efforts were made to develop it into one of the major agricultural commodities for export. In 1950 only 53,200 tons of palm oil were produced but by 1960 it had increased to over 90,000 tons. In 1970 the output was 396,200 tons from an area of 335,100 acres.

This rapid increase in output is reflected in the rising share of West Malaysia in the world's net exports of palm oil. In 1950 she accounted for less than 10 per cent. of the total but by 1966 West Malaysia had become the world's leading producer (27 per cent.), a position that she has been able to maintain since.

Government help in the oil palm programme has come in two forms. First, grants were made available for cultivation under Fund A of the Rubber Industry (Replanting) Fund Ordinance of 1952. These funds were meant to assist rubber estates in their programme to replace their low-yielding rubber trees with high-yielding trees but permission was given to use the funds for replanting with oil palms acreage previously under rubber over the period 1954-62. Second, the Federal Land Development Authority (Felda) was set up in 1956 to spearhead the Government's programme to eradicate rural poverty through land development. Rubber and oil palm are the two major crops grown on its schemes.

In the rice industry, which is second only to the rubber industry in terms of the number of people employed and the utilization of land area, some progress has likewise been made in the course of the diversification programme. Drainage and irrigation projects have opened up new lands, improved water supplies and water control on existing padi lands and introduced double-cropping in certain areas. Farmers have received special help such as the fertilizer subsidy scheme and the seed production scheme. Exchange programmes and educational programmes such as training in the use of Japanese pedestrian-type tractors have also been set up. The government has conducted research programmes which have been successful in breeding and selecting higher-yielding varieties of rice with wide adaptability, resistance to pest and diseases and greater response to the use of fertilizers. The farming community has also been assured of stable prices by the price support or guaranteed minimum price system.

All these factors helped to increase the production of rice from 182,290 thousand *gantangs* in 1951-2 to 562,449 thousand *gantangs* in 1969-70. The main impetus to this rapid increase came from the off-season crop which increased its output by nearly 630 per cent. per year in sharp contrast to the annual increases of 7 and 9 per cent. recorded in the main season crop and the dry padi crop respectively. As a result of these increases in production the level of self-sufficiency in West Malaysia rose to about 84 per cent. in 1970. A decade ago the level was only at 62 per cent.

These efforts at diversifying the economy have been successful in increasing the rate of growth of the real GDP over the years. Thus while the average annual rate of growth over the period 1956-60 was 3.7 per cent. that for the decade 1960-70 was around 4.5 per cent. On a per capita basis the increase was from 0.7 to 1.7 per cent.

The other two objectives of the West Malaysian government, that is, greater equity and a lower level of unemployment, have not, however, been achieved. Two methods of reducing the relative economic imbalance between the Malays and the non-Malays have been used. The first is the provision of physical amenities for the rural population while the second is the provision of land through comprehensive land development schemes. It cannot be denied that the rural sector has witnessed an unprecedented amount of construction in the years since independence. The number of health centres, schools, wells and bridges has increased very considerably as has the number of homes with electricity and the acreage under drainage and irrigation. The land development schemes have been spearheaded by Felda which adopts a 'captive project' approach. It opens up areas of land between 4,000 and 5,000 acres each, plants them with rubber or oil palm and provides them with rural roads, water, dwellings, schools, health centres, processing plants and roads links with the main highways. By 1970 Felda had developed around 305,000 acres and settled 20,700 families or about 15 per cent. of the rural population.

These are rather impressive achievements but they have not been able to bring about a reduction in the relative economic imbalance between the rural and the urban population. The statistical basis for this contention is not very strong but the contention is generally accepted. The equity objective has not been achieved because its fulfilment requires not only an increase in the income of the rural sector but also that this increase be greater than that in the urban sector. The provision of greater rural infrastructure and the establishment of land development schemes and developmental institutions have resulted in an increase in the economic welfare of the rural population. However, this increase has not been as that experienced in the commercial and manufacturing sectors. Thus over the period 1960-7 the average annual growth rate of the real value-added of the West

Malaysian agricultural sector was 4.2 per cent. while that for the industrial sector was 8.5 per cent. On top of this large discrepancy the available evidence also shows that the value-added per worker in the agricultural sector is significantly smaller than that in the secondary and tertiary sectors. Thus in 1970 the value-added per agricultural worker was only 68 per cent. of the countrywide value-added per worker. The findings of Kuznets suggest that the large difference in both the rate of growth and the absolute level is common to all countries.[9] All the empirical evidence thus indicates that under the existing occupational and geographical distributions of the Malays and the non-Malays the equity objective can only be achieved through an increase in Malay participation in commercial and industrial activities.

The diversification programme has also not been able to cope with the unemployment problem. If the unemployment figures given by the Department of Statistics are accepted as accurate and reliable then they show quite distinctly that the level of unemployment had increased from 2.0 per cent. in 1957 to 6.8 per cent. in 1967-8 and 8.0 per cent. in 1970. These figures, however, do not really reflect the seriousness of the problem as they refer only to the actively unemployed, that is, those who are not gainfully at work on any day during the period preceding enumeration but who are actively seeking employment and capable of taking a job if offered. The passively unemployed, that is, those who are not actively looking for work but who will accept work if offered, have not been included. If this category of the unemployed is included then the overall incidence of unemployment becomes considerably higher. For example, if adjustments are made for the figures for 1967-8 the level of unemployment was 9.0 per cent. and not 6.8 per cent.

History of Development Planning

Over the last two decades or so a large number of Asian, African and Latin-American countries have formulated and implemented development plans in an attempt to solve their economic, social and political problems. However, these plans differ so much in structure and content that the meaning of development planning has become rather vague.

For the purpose of this study the term 'development planning' is restricted to the formulation and authorization of economic, social and political programmes. To be more specific, the formulation consists of the determination of objectives, the enumeration of all the resources available, the consideration of alternative policies governing the ways in which the resources can be utilized, the checking for consistency to ensure that the objectives can be achieved with the resources available and the periodic revisions to allow for unexpected events. The authorization transforms the plan into a programme by designating priorities and areas of responsibility, setting specific targets, appropriating funds and manpower and establishing a network of communications.[10]

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[9] S. Kuznets, *Modern Economic Growth: Rate, Structure and Spread*, New Haven, Yale University Press, 1966.

Government involvement in such a planning process is automatic but the degree of this involvement depends on the political philosophy of the government or country concerned. In such predominantly private enterprise economies as the United States, the United Kingdom and Japan, the government plays an active but indirect part. Thus greater employment and higher incomes are obtained by expansionary monetary policy, increased government spending and tax rate adjustments. Inflation and deflation are checked by counter-cyclical fiscal policies, interest rate adjustments and income policies and balance of payment fluctuations are counteracted by tariff adjustment, exchange controls, import quotas and tax incentives.

In command economies such as the Soviet Union and China the government actively and directly controls the activities of practically all the productive units. Material and financial resources are not allocated on the basis of market prices and conditions of demand and supply. In the so-called 'mixed' economies where the government owns and operates a substantial part of the productive resources elements of both inducement and control are found.

Malaysia is basically a market economy but there are signs that the government is planning to play an active and a direct part in certain areas of the economy. It may be useful to trace out the developments over time by examining the five development plans that have been published so far.

(a) *Draft Development Plan 1950-5*

This was formulated in response to the passing of the United Kingdom Colonial Development and Welfare Act 1945 which provided £120 m. for development and welfare schemes in British colonies over the period 1945-56. In 1946 heads of departments were asked to submit proposals within the framework of a ten-year development programme. The outcome was an estimate of $542 m. for capital expenditure and $98 m. for recurrent expenditure. Over the next two years two committees were set up, first, to select so-called 'priority schemes' for immediate submission to the Colonial Office for grants from the Colonial Development and Welfare funds; and second, to allocate these funds between Singapore and West Malaysia. The guiding principle in the first task was to finance revenue producing schemes out of loans, annually recurrent expenditure out of revenue and non-revenue producing schemes out of grants from the Colonial Development and Welfare funds. About $43 m. was made available from the Colonial Development and Welfare funds to the two territories. West Malaysia was allocated $24 m., Singapore $7 m., while the balance of $12 m. was to be spent on joint projects.

The above exercise formed the basis of the *Draft Development Plan, 1950-5,* which was described as 'an attempt to define the objectives of social and economic policy for the period 1950-5, to balance them in relation to each other and to plan them within range of the resources available to finance them'.[11]

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[10] Keith B. Griffin and John L. Enos, *Planning Development,* London, Addison-Wesley Publishing Company, 1970, p.6.

The Plan itself was divided into four parts: (i) the development of social services, (ii) the development of national resources and utilities, (iii) the development of trade and industry, and (iv) a description of the sources of finance. The total capital expenditure by the government was set at $214.6 m. of which $55.2 m. was for the development of social services and $159.4 m. for the development of resources and utilities. Recurrent expenditure was estimated to be between $22.5 m. and $28.5 m. The projected amount for the development of social services varied from $13.2 m. to $17.7 m. while that for the development of resources and utilities was from $9.3 m. to $10.8 m.

While the *Draft Development Plan* was being written the Consultative Committee on South and Southeast Asia convened for the first time in Sydney in May 1950. This committee was established in January 1950, in Colombo, by the Foreign Ministers of the Commonwealth countries in order to accelerate the rate of economic development in South and Southeastern Asian countries. It was believed that this was necessary for the maintenance of political stability in the area and for the growth of world trade and the world economy.

As a result of the meeting in Sydney it was decided to draw up a programme for economic development for the region over the period 1951-6. Invitations were therefore sent out to the participating countries to prepare six-year development plans. Non-Commonwealth countries in the region were also invited to take part in the exercise. The Committee also decided to provide funds for a technical assistance programme for the area.

West Malaysia's contribution to the Colombo Plan was only the *Draft Development Plan* in a slightly modified form as the original estimates for the period 1950-5 were simply projected forward linearly for the period 1951-6. An additional capital expenditure of $169 m. for new items of development was included, resulting therefore in a total capital expenditure of $383.6 m. as against the $214.6 m. in the *Draft Development Plan*.

(b) *First Malaya Plan or A Plan of Development for Malaya, 1956-60*

The basis of this plan is the report of the IBRD Mission which came to West Malaysia in 1954, at the height of the Emergency and the decline in the boom generated by the Korean War, to prepare a report on the economic potential of the country.[12] The Mission noted that the infrastructure for the main export industries, particularly the European-dominated sections, was well developed. It recommended therefore that social overhead developments should be concentrated on the non-export, predominantly Malay, rural sector of the economy. It also emphasized the need for a massive rehabilitation programme for the rubber industry to enable it to compete successfully with the synthetic rubbers industry.

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[11] *Draft Development Plan of the Federation of Malaya, 1950-5*, Kuala Lumpur, 1950, p. 1.

[12] IBRD, *The Economic Development of Malaya*, Baltimore, Johns Hopkins Press, 1955.

The Mission recommended a public development expenditure of $778 m. over the period 1955-9. The biggest single item of expenditure was for rubber replanting ($125 m. or 16.6 per cent.). This was followed by the $94 m. or 12.1 per cent. set aside for the construction of roads and bridges in basically the non-export sector. The emphasis given to rural development can also be seen in the allocation for other development items.

The IBRD Report was a great help in the formulation of the First Malaya Plan as it was the first detailed and comprehensive study of the problems and the needs of West Malaysia. The Plan supported the IBRD Mission in its emphasis on the need to rehabilitate the rubber industry and to develop the rural subsistence sector. It differed from the IBRD Mission in that it also placed improvements to the tin industry and industrial development as being of the 'highest priority'.

Significant differences can be seen in the allocation of public development expenditure. In terms of the allocation between the three broad categories, economic, social and government miscellaneous and unallocated, the IBRD Mission recommended 62:25:13, while the Plan's suggested ratio was 60:30:10. In terms of the overall level of expenditure the Plan increased the IBRD Report figure of $778 m. by nearly 48 per cent. to $1,149 m. This was to take care of the expected increase in the cost of construction and in the expenditure for certain 'priority' items.

The Plan was dominated by the defence and security sector and the preoccupation of finding the revenue to finance the Emergency expenditure. This problem was aggravated by the decline in the prices of rubber and tin in the aftermath of the Korean War boom.

(c) *Second Malaya Plan, 1961-5*

This was formulated with technical assistance from the IBRD and was conceptually more satisfactory than the previous plans in being more than an aggregation of separate departmental expansion programmes. The objectives, in the order in which they were given, were an improvement in the rural standard of living, the provision of greater employment opportunities and a faster rate of economic growth, the diversification of agricultural and industrial activities and an expansion of social overhead facilities.

The planning technique used was the incremental capital-output ratio one, where the investment requirement is calculated on the basis of the desired rate of growth of output and a given incremental capital-output ratio (ICOR). With a target rate of increase of 22 per cent. in the total output over the period 1961-5 and an ICOR of 4 the investment ratio was estimated at 18 per cent. or $5,050 m. This represented an increase of nearly 67 per cent. over the actual amount invested over the preceding five years. In terms of the investment ratio it meant an increase from 12 per cent. to 18 per cent.

The public sector was expected to spend $2,150 m., or more than twice the amount of the actual public development expenditure over the last five years.

The private sector was expected to invest the other $2,900 m., which again represented a substantial increase (40 per cent.) over the level achieved under the First Malaya Plan, 1956-60. The bulk of this increase was projected to take place in the manufacturing, road transport, construction and commerce sectors.

The highest rate of increase in output was expected to take place in the construction industry (79 per cent.) and the lowest in the agricultural and other services sectors (15 per cent.). The other sectors into which the economy had been divided, the mining and manufacturing sector, the transport and utilities sector and the government services sector, were projected to grow at the respective rates of 36, 24 and 22 per cent.

The level of employment was expected to go up from 2,215 thousand to 2,555 thousand jobs, an increase of 15 per cent. The construction industry was projected to increase its intake of labour fastest (75 per cent.). This was in line with the projected increase in output, though a slight employment lag was assumed. The overall employment lag was expected to be much higher as the percentage increase in employment was assumed to be only 68 per cent. of the percentage increase in output.

(d) *First Malaysia Plan, 1966-70*

Before the formation of Malaysia in September 1963 each of the three component states, West Malaysia, Sabah and Sarawak, had its own development plan. The First Malaysia Plan was the first integrated plan for the three regions. It was also the first phase of a twenty-year Perspective Plan and presented the short-run measures of the government to solve the economic and social problems of the country within a broad and long-run strategy of economic development.

The objectives stated and the planning technique adopted were basically the same as those in the previous 1961-5 plan. The fundamental aim was the creation of an environment in which all the three ethnic groups could live in dignity and harmony. This was to be achieved through a faster rate of economic growth, the creation of greater employment opportunities and the reduction in the relative economic imbalance in the distribution of income and wealth. Economic diversification, infrastructural development and family planning programmes were simply operational devices to bring about the fundamental objective.

The technique used was primarily the ICOR approach. The real gross national output was projected to grow by 4.9 per cent. per annum or 24 per cent. over the period 1966-70. With an assumed ICOR of 3.9 investment was set at $9,730 m. or 19 per cent. of the gross national product. The private sector was expected to be the 'engine of growth' as its share of the investment was $6,160 m. The bulk of this was to take place in the industrial sector and its related trades. The traditional areas of estate planting and replanting, dwellings and commercial buildings and mining equipment were scheduled to play a smaller part. The aim was to create a level of investment which would increase from $1,010 m. in 1965 to $1,400 m. in 1970, compounded of a constant level in the perennial crops sector, a 5 per cent. annual increase in housing investment and a 10 per cent. increase per year in the other areas. The target of $6,160 m. represented an increase of about 40 per cent. over the level achieved in the preceding five years.

The share of the public sector in the programme was $3,570 m., projected at an average annual level that was only equal to the 1965 level of about $715 m. The dominant factor in determining this relatively conservative target for the public capital formation was the tight financial position of the public sector. A shortage of administrative and implementational capacity in the East Malaysian states was also a problem.

Employment was projected to increase by 377,000 jobs in West Malaysia and 84,000 jobs in East Malaysia. If the target was reached in West Malaysia the rate of unemployment would be reduced from 6.0 per cent. in 1965 to about 5.2 per cent. in 1970. The employment lag would be slightly smaller than that projected for the Second Malaya Plan as the percentage increase in employment was assumed to be only 62.5 per cent. of the percentage increase in output.

The objective of a more equitable distribution of income and wealth was to be achieved through the provision of better rural infrastructural facilities and the establishment of land development schemes. Malay participation in the commercial and industrial sectors was planned only on a very minor scale.

(e) *Second Malaysia Plan, 1971-5*

The formulation of this Plan was influenced very significantly by the civil disturbances of May 1969. They showed that under the apparent calm and prosperity there was a strong undercurrent of discontent in West Malaysia. The objective of a more even distribution of income and wealth received therefore the highest priority in this Plan. Its New Economic Policy aims at the eradication of poverty by raising income levels and increasing employment opportunities for all Malaysians, irrespective of race. The New Economic Policy also aims at accelerating the process of restructuring the Malaysian society to correct the economic imbalance so as to reduce and eventually eliminate the identification of race with economic function.

The gross national product in 1965 prices is expected to grow by 6.8 per cent. per year. No mention is made of the ICOR approach to planning. The aggregate level of planned investment is $12,150 m. which is 16.6 per cent. of the gross national product. This sum is about 48 per cent. greater than the level actually achieved over the period of the First Malaysia Plan. The private sector is expected to contribute $7,843 m. as compared to the $5,051 m. actually invested in the preceding five years, or an increase of over 55 per cent. The contribution of $4,307 m. from the public sector represents an increase of nearly 37 per cent. over the level actually invested in the period 1966-70.

Employment is projected to increase by 596,000 jobs at an average annual growth rate of 3.2 per cent. The labour force is expected to increase at the same rate to produce 645,000 additional workers. The number of people unemployed is therefore expected to increase by 49,000 and the rate of unemployment held at no more than its 1970 level of 7.3 per cent. of the labour force.

In contrast to the First Malaysia Plan the government is taking a more active and direct part in reducing the economic disparity between the Malays and the non-Malays. Land development is being stepped up while greater Malay participation in commerce and business is now encouraged, either through a more determined implementation of existing policies or through the establishmentof enterprises for Malays by such statutory bodies as PERNAS. In the past the programme to encourage Malay participation in the modern urban sector concentrated on the provision of educational and credit facilities. Equipped with paper qualifications and some capital the aspiring Malay 'entrepreneurs' were left to fend for themselves in the highly imperfect market system. This passive programme failed and the government has decided to play a more direct and active part in its programme to place 30 per cent. of the commerical and industrial activities under Malay management and ownership by 1990.

Nature and Scope of Development Planning

The case for development planning in most less developed countries is clear. The government is the only institution capable of organizing a massive development effort and the role of planning is to enable the government to carry this out in a systematic way. The case for planning in Malaysia is less obvious as Malaysia has obtained one of the highest standards of living in Asia by relying entirely on international trade. In fact Malaysia is often held up as the prototype of those less developed countries which have developed rapidly within the framework of a free market system.

However, further reliance on the market mechanism in Malaysia is no longer advisable under the existing economic, political and social conditions. There is a strong case for planning and this is based upon the inability of the price mechanism to bring about efficiency, growth and equity.

Advocates of the free market system argue that under certain assumptions the point at which the market is in equilibrium is also the point of maximum efficiency.[13] In other words, the economy will be in the Paretian optimum position, a proposition in economics which goes as far back as Adam Smith and his 'invisible hand'.[14]

The logical consistency and the beauty of this proposition cannot be gainsaid. However, the realism of some of its assumptions can certainly be questioned. Thus the free enterprise system can yield a Paretian optimum only if perfect competition prevails in all product and factor markets and correct information about present and future price and non-price variables is available. Consumers' tastes must be known and assumed to be independent of each other while producers must be profit-maximizers. At the same time capital has to be divisible and there must be no increasing returns to scale and no external economies. Such restrictive conditions cannot be satisfied in Malaysia so that reliance on a free market system is not likely to result in the maximization of efficiency and output.

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[13] A.P. Lerner, *The Economics of Control*, London, Macmillan, 1944; and O. Lange, *On the Economic Theory of Socialism*, University of Minnesota Press, 1938.

[14] Adam Smith, *The Wealth of Nations*, Modern Library, 1937, p. 423.

Nor is the free market mechanism likely to encourage economic growtn. All that a perfectly functioning market system can achieve is the maximization of current output from given resources. It does not have much effect on the rate at which capital can be accumulated, labour quality improved or natural resources exploited. In fact an efficient allocation of given resources may possibly conflict with economic growth. For instance, it may be argued that a monopolistic organization of industry generates faster growth than perfect competition does, by encouraging a higher rate of technical progress and investment.

The free market system is also unable to ensure equity. At the Paretian optimum, more of one commodity can be obtained only by having less of another commodity. Similarly the welfare of an individual can be increased only by making someone else worse off. There is no suggestion that the implied distribution of income is ideal. It is also not possible to say whether the welfare of a community at one Paretian optimum is higher than that at another. In fact the ability to infer is even narrower than this for it is not possible to compare a point of maximum efficiency with many non-optimum positions.[15]

These failures of the market mechanism are of special significance to Malaysia. In the first place, Malaysia is pursuing the New Economic Policy as a matter of political necessity, so that the inability of the unregulated market mechanism to ensure equity is a serious defect. In the second place, there is an economic diversification programme to reduce the dependence on rubber and tin, so that the question of growth *versus* efficiency will arise. In the third place, the presence of monopolistic practices in many areas of the Malaysian economy distorts commodity and factor prices, making even the limited attainment of efficiency doubtful. The case for development planning in Malaysia is therefore clear.

Development plans are usually drawn up in accordance with some mathematical model which is reckoned to represent best the structural conditions of the economy in the plan period. The use of a mathematical model is desirable as it ensures clarity of the problem at hand, feasibility or consistency of the plan and optimality in the use of available resources.

There are basically three types of planning models. The simplest type is the aggregate model which deals with the entire economy in such aggregate items as consumption, production, investment, saving, exports and imports. Aggregate models are usually used to determine the possible growth rates of the GDP under various simplified assumptions. For instance, if capital is assumed to be the only constraint then the Harrod-Domar model is used to estimate the growth rate of the GDP within the narrow framework of a given marginal productivity of capital and a given rate of saving.[16] If, on the other hand, the shortage of foreign exchange was the crucial bottleneck then the aggregate model will concentrate on exports, imports, terms of trade and sources of foreign financial assistance.

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[15] I.M.D. Little, *A Critique of Welfare Economics*, New York, Oxford University Press, 1957, Chapter 6.

[16] J. Tinbergen and H.C. Bos, *Mathematical Models of Economic Growth*, New York, McGraw-Hill, 1962.

The second type of planning model is the sectoral model which can in turn be divided into two approaches.[17] The first approach is to divide the entire economy into two or more main sectors with the aim of formulating an overall plan that is based on the co-ordinated activities of these sectors. Examples of disaggregation are the division into the agricultural and the non-agricultural sectors or the division into the consumer, producer and export-oriented sectors. The second approach is a partial one, where each sector or industry is assessed on its own merit without reference to the extent of interdependence between sectors or industries. This approach is popular among countries which lack statistical data and skilled planning personnel. However, it runs the danger of presenting a haphazard collection of assorted development projects which apparently have no inter-connections with one another.

The third and by far the most sophisticated type of development planning is the inter-industry approach in which the activities of all the productive sectors of the economy are linked to one another through a set of simultaneous linear equations which express the specific production processes of each industry. This model can be used to estimate the intermediate material, import, labour and capital requirements for any given target output of a sector and so to produce a comprehensive plan with mutually consistent production levels.

The distinguishing feature of this approach is therefore its ability to ensure internal consistency. Input-output tables are often used in planning specifically for this purpose. However, it is possible to extend the technique to include feasibility and optimality checks, where the aim is to further ensure that the production levels are possible with the given stock of resources and to see that they are the most efficient combination. This is to build the more complicated linear programming activity analysis models.

The Malaysian economy, with a large export sector that is dominated by rubber and tin and a small industrial sector that is quite narrowly based, has a simple structure. Because of this, inter-industry models, especially the programming type, which are primarily applicable in economies with a significant degree of industrial development and inter-industry transactions, are of little relevance. In any case the statistical data required for such an exercise are not available. The scope for development planning in Malaysia seems therefore to lie in the use of the aggregate and inter-related sectoral models. The former gives a rough first approximation of the general directions that the Malaysian economy may take and does not therefore constitute the operational development plan. It should not therefore be seen as more than a general overall framework of analysis for the construction of the inter-related sectoral model.

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[17] Michael P. Todaro, *Development Planning: Models and Methods*, Nairobi, Oxford University Press, 1971, pp. 10-11.

Evaluation of Development Plans

(a) *Draft Development Plan, 1950-5 and First Malaya Plan, 1956-60*

The above plans were no more than aggregations of the expansion programmes of separate governmental departments. The planning procedure was simple. Each government department was requested to submit its own claim for recurrent and development expenditure. The total of these claims would normally exceed the funds available and a committee, acting under certain unwritten rules and criteria, would reduce the sum total of the claims until it equalled that of the funds available.

These were therefore partial plans which were formulated with no regard for internal consistency. Moreover, the method in which the respective claims of the government departments were reduced to achieve equivalence between funds demanded and funds available left much to be desired. Priorities were not stated and ground rules not laid. Under such conditions the scope for haphazard decisions based on non-economic considerations was very wide.

At the same time the implementation of these plans, which were meant to spearhead the economic development of the country, was often delayed and, in certain cases, even halted because of the needs of the Emergency. This was especially true of the Draft Development Plan whose duration coincided with the most intensive period of communist activities. Over the period 1950-3 the total expenditure on defence, internal security services and the Emergency came to $640 m., or nearly 41 per cent. of the total expenditure of the federal government. Scarce skilled personnel had also to be diverted for Emergency duties. Technical and administrative departments were already greatly understaffed for normal duties over this period yet some of them had to release members of staff for work connected with the Emergency. For example, in 1951 forty technicians and twenty Malayan Civil Service senior officers had to be temporarily seconded for Emergency duties. Such diversion of human resources from the developmental effort delayed and sometimes even prevented the implementation of the Draft Development Plan.

Unfortunately it is not possible to substantiate this claim directly with empirical evidence as there are no published data on the rate of implementation either for the overall or the sectoral level of public development expenditure. However, an interim report on the Draft Development Plan over the period 1950-2[18] did emphasize the delays and the disruptions caused by the Emergency and there is no *a priori* reason for believing that the situation over the second part of the Plan period was any better.

The implementation of the First Malaya Plan was also affected by the Emergency as many backlogs of administrative work, such as the applications for land for industrial development, had to be cleared. However, the overall effect of the Emergency was small relative to that over the period of the previous plan. Actual public development expenditure amounted to $970 m. or some 85 per cent. of the target level of $1,150 m. This represents, in fact, quite a remarkable rate of implementation, especially in view of the unavoidable adjustments in the government machinery after Independence in 1957, and the unforeseeable world-wide recession in 1957-8 which reduced government revenue considerably.

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[18] *Progress Report on the Development Plan of the Federation of Malaya, 1950-2*, Kuala Lumpur, Government Printer, 1953, p. 8.

Thus as far as the overall rate of implementation of the development programme of the public sector is concerned (and this, in substance, is the First Malaya Plan), the Plan can be said to be a success. In terms of the expenditure by sector, Public Works Department plant and equipment (181 per cent.) and utilities (111 per cent.) had the highest rates of implementation. They were followed by transport (93 per cent.), agriculture (86 per cent.), communications (82 per cent.), industry (77 per cent.), social services (65 per cent.), and general activities (52 per cent.).[19]

The total gross investment over the period of the Plan was $3,000 m. or about 12 per cent. of the total income. The private sector therefore accounted for about 60 per cent. of the total investment, which represents a substantial increase over the private investment undertaken in the preceding five years. The bulk of this increase occurred in the manufacturing sector as a result primarily of the investment incentives provided under the Pioneer Industries Ordinance of 1958. The agricultural sector, particularly the rubber industry, responded to the development programme rapidly. Financial assistance from the replanting cess on smallholder rubber (Fund B of the Rubber Industry Replanting Fund Ordinance 1952) and other government assistance resulted in 308,000 acres being replanted and 86,000 acres being newly developed. The estates responded even faster, for they replanted 357,000 acres and developed 79,000 acres. The result of all these activities was that the acreage under high-yielding materials increased from 30 to 46 per cent. of the total acreage over the Plan period.

In its review of the First Malaya Plan, the Second Malaya Plan pointed out that rough estimates of the total output of goods and services over the period 1956-60 showed an average arithmetic rate of growth of 4.0 per cent. per annum. This was faster than the corresponding growth rate of the population so that the per capita income went up by an average of 0.7 per cent. per annum. The respective average compound rates of growth were 3.7 per cent. and 0.6 per cent.

These rates of increase, while respectable by themselves and relatively high compared to those achieved in other less developed countries, probably underestimate the achievement of the First Malaya Plan. It should be remembered that the Plan's two major aims were the rehabilitation of the rubber industry and the provision of more and better physical amenities to the rural sector. Both these programmes were successfully implemented but as their gestation periods were much longer than five years the benefits were not reflected in increases in the GDP over the period 1956-60. In any case the First Malaya Plan did not contain any forecasts on income growth.

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[19] *Second Malaya Plan, 1961-5*, Kuala Lumpur, Government Printer, 1961, pp. 7-8.

To sum up, the Draft Development Plan and the First Malaya Plan were constructed without an adequate knowledge of planning techniques. They were basically development programmes for the public sector, formulated without any check for internal consistency. No attempt was made to relate capital requirements of both the private and the public sectors to target levels of such variables as income and employment. However, if they are assessed within this narrow framework, that is, as public development programmes, then they were carried out quite satisfactorily especially in view of the heavy demands of the Emergency.

(b) *Second Malaya Plan, 1961-5*

This was a planning document superior to its two predecessors both in presentation and technique. It contained four chapters which were laid out in a systematic way. Thus it started with a review of the progress made under the First Malaya Plan and followed this up with an analysis of the prevailing problems of the country and a statement of the objectives of the current plan. The financial resources required for the fulfilment of these objectives were then estimated and this was followed by an examination of the possible sources of these funds. This presentation was in sharp contrast to that in the First Malaya Plan or the Draft Development Plan where both the style and the logical sequence left much to be desired.

An aggregate Harrod-Domar model was used to estimate the level of investment required to achieve the target output growth rate of 22 per cent. over the five year period. Ignoring population growth, the rate of growth of a Harrod-Domar economy is $g = s/k$, where s is the rate of saving and k the marginal or incremental capital-output ratio. With a target annual rate of growth of g equal to 4.4 per cent. and a k equal to 4, the rate of saving works out to be 17.6 per cent. of the total output or $5,050 m. in terms of value.

This approach to planning is conceptually more satisfactory than that adopted in the preceding plans. It gives direction to the development effort firstly in identifying overall objectives and secondly in presenting some of these in numerical form. It also provides an objective basis for the allocation of public development expenditure between the various government departments, thereby avoiding the scramble for funds under the previous system. The use of the Harrod-Domar model also enables the requisite level of private investment to be estimated. Although this is often derived as a residual its inclusion as a target provides the planning authorities with some picture of the role of the private sector. In a country such as Malaysia where there is a large private sector this inclusion is important.

The Second Malayan Plan, again unlike its predecessors, had an employment target. This was set at 340,000 additional jobs, an increase of 15 per cent. which corresponded to that expected of the labour force over the Plan period. The target was estimated on the assumption of an overall output elasticity of employment, defined as the ratio of the percentage increases of employment and output, of 0.68. The target output and employment indices and the implied elasticities for the total and for the different sectors are given in Table I.1.

Table I.1

Indices of Output and Employment Targets and Implied Output Elasticities of Employment

Sector	*Volume of output in 1965 (1960 = 100)*	*Employment in 1965 (1960 = 100)*	*% in Employment / % in Output*
Agriculture	115	111	.73
Mining and manufacturing	136	120	.58
Construction	179	175	.95
Transport and utilities	124	126	1.08
Government services	122	118	.82
Other services	115	112	.80
Total	122	115	.68

The evaluation of the Plan in terms of the objectives it set itself is conducted in two ways. The first is to see whether the planned private and public investment levels were reached, the second whether the stated overall objectives in income, employment, and so forth, were achieved. The private investment target of $2,150 m. was exceeded by some $500 m. This represents a rate of implementation in the public sector of over 123 per cent.[20]

The Plan also succeeded in meeting its stated overall objectives. For example, the annual growth rate of the GDP at constant prices was 6.4 per cent. against the target growth rate of 4.4 per cent. The revised target number of additional jobs was 326,000 while the actual number created was 344,000. This succeeded in keeping the rate of unemployment at the 1960 level of 6.0 per cent. More facilities were provided and opportunities created to improve the economic and social well-being of the rural population. Thus the completion of a large number of irrigation and drainage schemes increased the area of rice under double-cropping from 38,000 to 193,000 acres. The rubber replanting scheme enabled 50 per cent. of the smallholder acreage to be under higher-yielding cloves by the end of the Plan period. At the same time medical and educational facilities in the rural areas were also improved.

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[20] *Interim Review of Development in Malaya under the Second Five-Year Plan*, Kuala Lumpur, Government Printer, 1963, p. 36 and *First Malaysia Plan, 1966-70*, Kuala Lumpur, Government Printer, 1965, p. 34.

Two areas of criticism exist around the Second Malaya Plan. The first is to question the relevance of the Harrod-Domar model for planning in less developed countries, especially those with large foreign trade sectors. The implicit assumption of the Harrod-Domar model is that the shortage of capital is the crucial bottleneck to economic growth, an assumption that is not borne out in a number of less developed countries and certainly not in Malaysia. If the less developed countries concerned has a large export sector, as in the case of Malaysia, the usefulness of the model is in even greater doubt, for then the fate of the economy is determined largely by exogenous factors. It should also be noted that capital requirements for a given target income growth are determined, under the Harrod-Domar model, on the basis of a given ICOR. Malaysia, like so many other less developed countries, is undergoing rapid technological and social change so that the marginal productivity of capital is changing all the time. It should therefore come as no surprise that predictions based on the Harrod-Domar model are often inaccurate.[21]

The second area of criticism concerns the employment and the equity objectives. Though the Plan succeeded in fulfilling its employment target the rate of unemployment was still relatively high at 6 per cent. In all probability the actual rate of unemployment was higher than 6 per cent. because the use of Western-oriented concepts of employment, unemployment and underemployment in Malaysian conditions tended to underestimate the seriousness of the problem.[22] To the extent that the provision of rural infrastructure had improved the health and living conditions of the rural population and had provided a cheaper and an easier access to the market, the government might have felt justified in claiming that it had increased the standard of living of the rural population. However, it can easily be argued that much of the benefits of this indirect approach had accrued to the monopolistic and monopsonistic operators of the rural economy.[23]

(c) *First Malaysia Plan, 1966-70*

This Plan is also based on the aggregate Harrod-Domar model so that the criticisms directed at this model of planning in connection with the previous plan are also applicable here. The evaluation will therefore be concentrated on the fulfilment of planned development expenditure and overall objectives such as income and employment.

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[21] Salvatore Schiavo-Campo and Hans W. Singer, *Perspectives of Economic Development*, Boston, Houghton Mifflin, 1970, pp. 55-66.

[22] David Lim, *Economic Growth and Development in West Malaysia*, Kuala Lumpur, Oxford University Press, 1973, Chapter 9.

[23] Ungku Abdul Aziz, 'Poverty and Rural Development', *Kajian Ekonomi Malaysia* (June 1964).

The total investment was $8,204 m. which was about 15.6 per cent. short of the target of $9,730 m. Private investment amounted to $5,050 m. which was about 18 per cent. below the target of $6,160 m. while public investment was $3,153 m., some 12 per cent. short of the target of $3,570 m. In terms of public development expenditure, which is public investment plus expenditure on defence, purchase of land, loans and grants to the private sector and expenditure on the creation of physical assets owned by the private sector, the shortfall was only about 7 per cent. ($4,242 m. as against $4,551 m.).[24]

The inability of the Plan to fulfil its investment target was met, at the same time, with a rate of growth in output that was greater than that projected. Thus while the Plan envisaged that the GNP in constant prices would increase by 4.9 per cent. per annum the rate achieved was about 6.0 per cent. per annum, from $8,637 m. in 1965 to $11,537 m. in 1970. At current market prices, the GNP rose at 6.5 per cent. per annum as against the target of 4.8 per cent. per annum, in spite of a fall in the prices of the country's major export commodities.

The failure of the Plan to predict the growth of output accurately is due to the insensitivity of the Harrod-Domar model to external factors. The 'engine of growth' over the period of the Plan was expected to be the domestic sector.[25] However, against all expectations, it was the export sector which spearheaded the growth of the economy. On the whole, the prices of the country's major export commodities did not decline as much as projected and the output of practically all these commodities was higher than estimated. The result was that the value of merchandise exports increased at 6.3 per cent. per annum as against the Plan forecast of 0.6 per cent. per annum.

The error in forecasting the growth of output was a 'painless' one as the planned target was smaller than that actually achieved. However, the same could not be said of the target for employment. The number of jobs created in West Malaysia was 350,000 as against the target of 377,000. At the same time the labour force increased by 420,000 compared to the Plan estimate of 377,000. The result was that the rate of unemployment went up from 6.0 per cent. in 1965 to 8.0 per cent. in 1970. The Plan had expected a decline from 6.0 per cent. to 5.2 per cent. For Malaysia as a whole the rate of unemployment increased from 6.0 per cent. to 7.3 per cent.

The programme to bring about a more equitable distribution of income and wealth was generally felt to have been largely ineffective. There are no published statistical data to substantiate this claim but the Second Malaysia Plan did admit that the relative economic imbalance between the Malays and the non-Malays had not been reduced significantly, if at all.

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[24] *Second Malaysia Plan, 1971-5*, Kuala Lumpur, Government Printer, 1971, p. 27.

[25] *Ibid.*, p. 19.

(d) *Second Malaysia Plan, 1971-5*

It would be premature to attempt an evaluation of this plan at the time of writing. The government has just started its own mid-term review and it would be more appropriate to wait until the publication of this report. All that need be said at this stage is that the Second Malaysia Plan seems to have accepted implicitly the possibility that certain of its objectives might conflict and that there is a need, therefore, for stating its priorities and not simply proceeding on an *ad hoc* basis.

SECTION II

DEVELOPMENT OBJECTIVES AND STRATEGY

Social and Economic Policy

The hierarchy of objectives adopted is the one presented by Griffin and Enos.[26] At the most abstract and unquantifiable level there are the aspirations of the plan which reflect the ultimate aims of the society. At the intermediate level are the goals which, though still abstract, may be achieved over the plan period. Then there are the specific targets which are expressed in quantitative terms.

The movement from the general to the specific has to be made in all development plans for it is only against the specific targets that the performance of the plan can be assessed. At the same time the planner has to ensure that the targets are consistent with the goals and the goals with the aspirations.

The choice of aspirations for the society is made through the political system. It is of no concern to the planner as a technician what these aspirations are so long as they have the support of the people in power. This does not mean, of course, that the planner as an intelligent, well-informed and socially-conscious individual cannot have views on the matter. However, it does mean that as a technician he cannot substitute his own aspirations for those of the society.

The translation of aspirations into goals is also basically outside the province of the planner. His immediate task is to convert the goals into targets and then inform the political leaders the opportunity cost of each of the goals desired. This is an important aspect of planning as there are always more goals than a society can possibly attain and choices have therefore to be made. These choices can only be made rationally if the policy-makers know how much of one goal has to be sacrificed in order to have a certain amount of another. The planner thus has a real but indirect say in the statement of goals.

In Malaysia the aspirations of development planning have recently undergone significant changes. Over the period of the Draft Development Plan and the First Malaya Plan, that is, roughly, the period before independence, the fundamental aim could be said to be production for the greater welfare of the United Kingdom. This is to recognize the colonial system for what it was, a trading system, based not on economic factors but the power of the military for the benefit of the colonial power. This does not, of course, mean that Malaysia did not gain from the system. All that is implied is that such benefits were the by-product rather than the basic aim of the colonial economic system.

The aspirations of the plans formulated in the years after independence are very different. Take, for instance, the First Malaysia Plan, 1966-70. Its fundamental aim is 'to promote the integration of the peoples and states of Malaysia by embarking upon a development plan explicitly designed to promote the welfare of all'.[27] The aim can be interpreted as an improvement in the environment so that all races may live together in peace and dignity.[28] The difference between this aspiration and that in the plans formulated prior to 1957 is that the welfare of the population of Malaysia is seen as an end in itself and not merely as a means towards an end.

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[26] Griffin and Enos, *Development Planning*, *op. cit.*, pp. 31-41.

The Second Malaysia Plan, 1971-5, has as its over-riding objective the national unity of the country. Under the New Economic Policy the development of Malaysia is to be undertaken in such a manner that 'in the process of growth and expansion, it makes the maximum contribution to the achievement of national unity'.[29] This aspiration is basically the same as that of the First Malaysia Plan for unless the three ethnic groups can live together in harmony and dignity presumably there can be no national unity. The only difference is the greater emphasis given to it in the Second Malaysia Plan, probably as a result of the civil disturbances of May 1969.

Development Objectives

In the plans formulated before 1957 the development objectives, or goals in Griffin and Enos' terminology, were the maintenance of law and order and an aversion for unbalanced budgets. Law and order was an important issue because of the need for internal stability so that the largely foreign-owned or foreign-controlled export sector of rubber and tin could function efficiently. The pursuit of balanced budgets complemented the provision of physical stability for it gave financial stability and respectability to the system. In short, the goals provided the framework whereby large profits from the rubber and tin industries could be repatriated to the United Kingdom, which was also assured of a steady and cheap source of these two important raw materials. At the same time British manufacturers had a protected market for their products.

It is therefore somewhat ironical that the pursuit of such conservative fiscal policies might have acted against the very thing that the colonial system was hoping to achieve. The Finance Secretaries of Colonial Governments believed economic development to be purely a function of capital requirements and, as they assumed Malaysia to lack such capital funds, the source of growth was seen to be the influx of foreign capital. They also believed that the best way to attract private foreign investment was to keep taxes down in order to lower the costs and raise the incentives for foreign investors, and to balance the budget in order to demonstrate the stability and responsibility of the government. The implication of all these assumptions was that 'the only economic policy the country could have would be fiscal policy, with its narrow but rational year-by-year orientation to government revenues and expenditures'.[30]

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[27] *First Malaysia Plan, 1966-70,* Kuala Lumpur, Government Printer, 1965, p. 2.

[28] W.B. Gates Jr., 'Can We Improve Upon the First Malaysia Development Plan?', *United Malayan Banking Corporation Economic Review* (1967).

[29] *Second Malaysia Plan, 1971-5, op. cit.,* p. 3.

It can be argued that belief in a 'capital-oriented' approach to development need not necessarily entail a balanced budget. Confidence in a country does not depend only on the pursuit of conservative fiscal policies and low taxes. A 'more general atmosphere of growth and the image of a potential for increasing wealth'[31] are also necessary to induce investment from both local and foreign entrepreneurs. This does not mean that there is no fiscal responsibility, only that there are other more important factors in stimulating economic growth and development. As such the strict adherence to a balanced budget perhaps slowed down the rate of economic growth in Malaysia, thereby reducing the effectiveness with which the fundamental aspiration of the colonial system could be achieved.

The goals, or development objectives, of the plans formulated after 1957 are the attainment of a higher rate of economic growth, the creation of greater employment opportunities and a more equitable distribution of income and wealth. The first may be called an economic goal as it aims primarily at changing the structure of output. The diversification of the Malaysian economy then can be seen as an economic objective directed at increasing the rate of growth of the economy. The third goal may be called a social goal as it is directed primarily at altering the distribution of output. The creation of greater employment opportunities contains both economic and social elements as an increase in the labour force can, under certain circumstances, result in greater economic growth and the provision of employment is also an effective way of reducing the relative economic imbalance between the Malays and the non-Malays.

Superimposed on the economic and social goals are the temporal goals. Every economic decision involves the time factor and the inter-temporal problem is simply the choice between having something now or having it in the future. Take the cases of the development objectives of maximum current output, maximum current employment and minimum current inequality in the distribution of income and wealth, the three goals of Malaysian development planning today. Maximum current production would seem, on the surface, to be perfectly compatible with maximum current employment for it is difficult to imagine situations where it is impossible to find anything useful to do for extra hands. However, the choice facing Malaysia is not simply one of employing additional hands to man the existing capital stock. It is to choose the type of new equipment to install and in this choice the conflict may arise.

Suppose $100,000 is available for investment in the textile industry and the choice is between a modern plant and hand-spinning. Suppose that the capital-output ratio in the modern factory is 2.5 and that the capital cost per work-place for a given degree of capital utilization is $1,000. The choice of the modern plant will therefore result in additional employment for 100 workers and an extra output equal to $40,000. Suppose that the capital-output ratio for hand-spinning is higher at 5.0 and that the cost per work-place is $100. If all of the $100,000 were invested in this method of production then the extra employment generated will be 1,000 but output will have increased by only $20,000.[32]

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[30] Gayl D. Ness, *Bureaucracy and Rural Development in Malaysia*, Berkeley, University of California Press, 1967, p. 95.

[31] *Ibid.*, p. 96.

The conflict between employment and output creation is rather marked in this example, and has arisen because of the assumption that the more labour-intensive method, as measured by a lower capital-labour ratio or a smaller cost per work-place, uses more capital resources per unit of output than the more capital-intensive method. This is a realistic assumption for the textile industry and arguably for many industries.[33] Methods of production are developed over time generally with the labour-intensive methods coming first so that at any one point in time there is a choice between labour-intensive and capital-intensive techniques of production. The later and more capital-intensive techniques of production are more likely to utilize less capital per unit of output because machinery is being adapted all the time for large-scale production to obtain economies of scale. One consequence of this is greater economy in the use of capital relative to the output level.

The conflict between maximum current output and maximum current employment is complicated by the possibility that less employment and more production now could lead to more employment later than would otherwise have been possible. The higher level of output now will supply more resources to purchase machines which will provide jobs in the next period. Suppose that 20 per cent. of the income generated in the modern factory and hand-spinning operation of our numerical example is saved. The modern factory will yield an investible fund of $8,000 for the next period while the traditional method will yield one of only $4,000. If the same $1,000 per work place technique is retained for the factory method, it will lead to an annual growth in income and employment of 8 per cent. while the hand-spinning wheel alternative with its $100 per work-place technique will result in an annual growth rate of only 4 per cent. The divergence will, in reality, be even greater as a capital-intensive technique is more likely to have a higher savings ratio for the same income level than a labour-intensive one.

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[32] This numerical example is taken from Frances Stewart and Paul Streeten, 'Conflicts between Output and Employment Objectives in Developing Countries', *Oxford Economic Papers* (July 1972).

[33] Bhalla discovered that the capital-output ratio for factory methods in cotton spinning was only about 75 per cent. of that of the hand Ambar Charkha methods. See A.S. Bhalla, 'Investment Allocation and Technological Choice – A Case of Cotton Spinning Techniques', *Economic Journal* (September 1964). Bhalla's analysis of rice pounding suggests the same conflict: A.S. Bhalla, 'Choosing Techniques: Handpounding *vs.* Machine Milling of Rice: an Indian case', *Oxford Economic Papers* (March 1965).

This discussion has great relevance to development planning in Malaysia as all the available evidence suggests that the unemployment problem is worsening and that the manufacturing sector is highly capital-intensive.[34] Too much is read into the situation if it is claimed that the high capital-intensity is the result of a deliberate policy to provide for greater growth and employment in the future. This would be a rationalization of an ingrained preference for a capital-centred' approach to development, itself a result of the long and constant exposure to Western-oriented economic theorizing. This contention is supported to a large extent by the passing of the Investment Incentives (Amendment) Act of 1971 whose most important feature is the labour utilization relief which provides tax exemption based on the number of workers employed. If the conflict between maximum current output and maximum current employment is accepted and the policy is to forego some employment opportunities now for more in the future, it is unlikely that there would have been legislation to subsidize the use of labour.

If the creation of employment opportunities is seen as the only method by which a more equitable distribution of income and wealth is to be achieved, then by implication there will be a conflict between the growth and the equity objectives. Three further points have to be made about the equity through employment approach. The first is that the provision of employment is more effective in redistributing income than wealth. Wealth is more efficiently reallocated through such measures as the reservation of company shares for the poorer groups and the implementation of a comprehensive land tenure reform programme. The second point is that the creation of employment in the rural areas by itself cannot do much to reduce inequality because the absolute level and the growth rate of the value-added per rural worker are considerably smaller than those of the value-added per urban worker. The third point that has to be made is related to the peculiarities of the equity problem in Malaysia. The problem is to reduce the economic inequality between the Malays and the non-Malays and it cannot be solved through the creation of greater employment opportunities if the programme is to take place within a free market system. The government has to specify that the composition of the labour force reflect that of the overall population. The programme to increase Malay participation in commerce and industry as contained in the Second Malaysia Plan may thus have been formulated with these points in mind.

The existence of incompatibility between the output and the employment and equity goals is a dilemma faced by planners in all countries.[35] The problem has been given greater urgency and publicity in Malaysia because of the racial coloration of the situation. Ignoring the dilemma may result in social and political upheavals. At the very least it will encourage misplaced optimism on the ability of the development plans to solve the problems of the country. As such it is important to see whether preferences for certain objectives have been explicitly stated or implicitly assumed in development planning in Malaysia.

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[34] Lim, *Economic Growth and Development in West Malaysia, op. cit.*, Chapter 9.

[35] Timothy King, 'Development Strategy and Investment Criteria: Complementary or Competitive?', *Quarterly Journal of Economics* (February 1966).

There are basically four ways of presenting the three goals of growth, employment and equity. One is to maximize growth without any regard for the other two objectives. This is a politically unacceptable and perhaps a morally indefensible approach. The second is to maximize growth subject to the constraint that the rate of unemployment is not greater than *x* per cent. and that the Gini coefficient of income and wealth concentration must be reduced by *y* points. This typical linear programming approach is favoured by governments as they believe that they do have some idea of the level of unemployment and the extent of inequality that can be politically tolerated. However, this approach is difficult to adopt in practice as statistical data are not available for calculating the marginal rates of transformation of the conflicting objectives.

The third approach is to arrange the conflicting objectives in the form of a national indifference map. This would enable the government to state that it is indifferent, for example, between a combination of a 2 per cent. growth rate of output, 4 per cent. unemployment and a Gini coefficient of inequality of 50 per cent. and a combination of a 2.5 per cent. rate of growth, 3 per cent. unemployment and a Gini coefficient of 55 per cent. but prefers both to a combination of 3 per cent. growth, 2 per cent. unemployment and a Gini coefficient of 70 per cent. This conceptually appealing approach has, however, little operational value as data on the trade-offs are not available and it is therefore not possible to reach the highest attainable indifference plane.

The fourth method of formulating the three goals is to leave them as deliberately vague statements of desirable events and only hint at their respective importance. The lack of statistical data and the need to accommodate conflicting political interests have usually forced governments to make decisions on this *ad hoc* basis and to work along 'satisficing' rather than maximizing lines.

The Second Malaya Plan, 1961-5, and the First Malaysia Plan, 1966-70, adopted the *ad hoc* method of formulating the objectives. Each one of the three objectives received its share of emphasis over the period of the two plans but nothing specific on their relative importance was mentioned explicitly. The same cannot be said of the approach adopted in the Second Malaysia Plan, 1971-5. From the tone and presentation of the Plan and from its new policies and allocation of public development expenditure, it would seem that the reduction of inequality in the distribution of income and wealth has become the most important objective. The style of the approach, though not its specific formulation, thus resembles that of the constrained maximization approach to development planning.

Development Targets

The targets for the Draft Development Plan and the First Malaya Plan were the public development expenditures that were allocated to the various governmental departments. One way of testing the consistency between the objectives and targets is to see whether the share of a departmental allocation in the total development expenditure reflected the importance given to it in the plan.

In this respect no analysis of the Draft Development Plan can be attempted, as data on the planned public development expenditure by sector are not available. Table II.1 shows the value and the percentage composition of the planned public development expenditure by sector under the First Malaya Plan. It can be seen that the largest items of expenditure were on agriculture, transport, utilities and social services. Such an allocation of funds was in accordance with the objective of the First Malaya Plan to rehabilitate the rubber industry and to provide the rural population with physical amenities. The expenditure allocated to the rubber replanting programme alone came to $160 m. which was over 60 per cent. of the expenditure for agriculture and nearly 14 per cent. of the entire public development expenditure. A significant proportion of the expenditure planned for the transport, utilities and social services sectors was scheduled for rural-oriented activities.

Table II.1

Planned Public Development Expenditure by Sector
First Malaya Plan, 1956-60

Sector	*$m.*	*Per cent. of total*
Agriculture	265.6	23.1
Transport	222.5	19.4
PWD plant and equipment	13.0	1.1
Communications	63.3	5.5
Utilities	214.5	18.7
Industrial development	15.8	1.4
Government	141.3	12.3
Social services	212.7	18.5
Total	1,148.7	100.0

Source: Second Malaya Plan, 1961-65, op. cit., pp. 7-8.

Although the Second Malaya Plan, the First Malaysia Plan and the Second Malaysia Plan were based primarily on the aggregate Harrod-Domar model, they varied significantly in the coverage and in their degree of complexity. The Second Malaya Plan was the narrowest and the simplest of the three. The targets set in order to achieve a 22 per cent. increase in output and a 15 per cent. increase in employment were the investment of $2,150 m. for the public sector and $2,900 m. for the private sector. The public investment by sector is given in Table II.2.

Table II.2

Planned Public Investment by Sector, Second Malaya Plan, 1961-5

Sector	*$m.*	*Per cent. of total*
Agriculture	545.3	25.4
Transport	362.0	16.8
PWD plant and equipment	68.7	3.2
Communications	72.9	3.4
Utilities	402.0	18.7
Industrial development	27.0	1.3
Government	121.1	5.6
Social services	491.0	22.8
Defence	60.0	2.8
Total	2,150.0	100.0

Source: Second Malaya Plan, 1961-65, op. cit., pp. 29-30.

It can be seen that the same four sectors, agriculture, transport, utilities and social services, received the bulk of the expenditure. On the surface at least this pattern of allocation seems to be consistent with the stated goals of rural development and an improvement in the social overhead facilities. The biggest item of expenditure in the agricultural sector was on the land development programme. As the main agent in this was the Federal Land Development Authority, which developed new land for the landless and cultivated oil palm as an alternative to rubber, the expenditure could be said to be consistent with the growth and the equity goals. For the transport, utilities and social services sectors the main items of expenditure were on the construction of roads and bridges, the electrification programme and the establishment of schools and medical centres. These are activities with a rural bias.

The private sector was expected to invest $2,900 m. Most of it was expected to come from the manufacturing, transport, construction and commerce industries but specific expected investment levels of sector were not given as targets. This was in line with the philosophy of indicative planning where the task of the government is only to provide the necessary incentives and assistance.

Corresponding to the investment targets are the targets set for the various sources of investible funds. For the public investment target of $2,510 m., $340 m. was expected to come from the federal and state budgetary surpluses and the renewal funds and current surpluses of public enterprises. About $900 m. was expected from domestic borrowing from the Employees Provident Fund, the Post Office Savings Bank, the Currency Board and other banks. External sources made up of foreign loans and grant assistance were expected to provide another $585 m., leaving $325 m. which was to be supplied from government balances.

Most of the target of $2,900 m. for private investment was to be financed from the national savings of the country. About $3,700 m. of savings was expected of which $1,285 m. would be absorbed by the public sector for investment purposes. This would leave $2,415 m. for private investment and $485 m. to be supplied from foreign sources. Reinvested earnings of foreign owned estates and other enterprises in the country were expected to be $400 m., leaving $85 m. to be supplied through new foreign investment.

The First Malaysia Plan is a more complicated document. To begin with its development objective of 4.8 per cent. per annum for the GNP at current prices was in two parts, the production for domestic use (8.0 per cent.) and the exports of goods and services (0.6 per cent.), thus, unlike the previous plan, projections of the major export items were given. Then the investment targets were presented in a more detailed manner. The division between the public and the private sectors was given not only for the overall level but also for the perennial crops and the dwellings sectors. Thus of the $6,160 m. for private investment, $1,325 m. was expected for the perennial crops, $1,025 m. for dwellings and $3,810 m. for the rest. Of the $3,570 m. for public investment, $245 m. was for perennial crops and $350 m. for dwellings. It will be noticed that the unspecified investment for the public and private investment constitutes a large proportion of the total investment. Whereas a good idea of the public investment by sector can be obtained by examining the public development expenditure by sector, there is no way of estimating for the private sector except by inferring from general remarks such as 'government policy will . . . be directed towards channelling a rapidly growing volume of investment into less familiar fields, particularly industry and its related service fields . . . .'[36]

Table II.3 shows the planned public development expenditure by sector under the First Malaysia Plan. Again the biggest items are agriculture, transport, utilities and social services and again the bias for rural development can be detected if the detailed allocations for each item are examined. The resources for financing the public programme are government surpluses ($200 m.), public authorities surpluses ($425 m.), domestic non-bank borrowing ($1,025 m.), bank credit and government accumulated assets ($1,000 m.), foreign borrowing ($1,000 m.) and foreign grants ($900 m.).

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[36] *First Malaysian Plan, 1966-70, op. cit.*, p. 48.

Table II.3

Planned Public Development Expenditure by Sector, First Malaysia Plan, 1966-70

Sector	*$m.*	*Per cent. of total*
Agriculture and rural development	1,086.6	23.9
Mining	1.3	-
Industrial development	114.5	2.5
Transport	546.0	12.0
Communications	205.5	4.5
Utilities	786.3	17.2
Education and training	440.8	9.7
Health and family planning	189.4	4.2
Social and community services	315.1	6.9
General administration	126.4	2.8
Defence	600.0	13.1
Internal security	139.0	3.0
Total	4,550.9	100.0

Source: First Malaysia Plan, 1966-70, op. cit., pp. 69-70.

Of the private investment target of $6,160 m. private long-term capital inflow was expected to contribute $1,000 m. This was lower than the amount received in the previous five years because changes in the tax regulations in the UK concerning the remittances of profits from overseas trading companies and political uncertainty in Southeast Asia were expected to have a dampening effect. The other $5,160 m. was expected to consist of $4,950 m. of investment finance from the domestic private sector and $210 m. from the public sector financing of private investment.

In the past the balance of payments had not been an item of concern but the situation changed with declining prices for rubber and an increasing import bill. Targets for the balance of payments items were therefore given considerable importance. A deficit of $1,579 m. was expected on the balance of trade and services account which, together with a net deficit private transfers position of $87[illegible] m. and a net surplus government transfers position of $767 m., resulted in an expected deficit of $1,686 m. on the current account. On the capital account private and public long-term capital was expected to total $2,000 m., while monetary movements and short-term capital were expected to show a deficit of around $315 m.

Table II.4

Planned Public Development Expenditure by Sector,
Second Malaysia Plan, 1971-5

Sector	*$m.*	*Per cent. of total*
Economic	*4,871.0*	*67.2*
Agriculture and rural development	1,920.9	26.5
Mineral resources development	.7	-
Commerce and industry	583.6	8.0
Feasibility studies	30.3	0.4
Transport	1,188.4	16.4
Communications	400.0	5.5
Utilities	747.1	10.3
Social	*1,067.4*	*14.7*
Education and training	537.3	7.4
Health and family planning	213.6	2.9
Social and community services	316.5	4.4
General Administration	*211.6*	*2.9*
Security	*1,100.1*	*15.2*
Defence	850.1	11.7
Internal security	250.0	3.5
Total	7,250.0	100.0

Source: Second Malaysia Plan, 1971-5, op. cit., pp. 68-71.

The presentation of targets in the Second Malaysia Plan was similar to the above. Thus, targets for the exports of major commodities were given so that an average growth rate of 4.6 per cent. should be attained for the export sector. These export targets were followed by the investment targets. The public development expenditure by sector is given in Table II.4. The emphasis on the equity problem is clear in the pattern of allocation shown in the table. Land development programmes constitute by far the largest item of expenditure in the agricultural and rural development sector ($908.8 m. or 47 per cent. of the sector). The bulk of the $583.6 m. set aside for the commerce and industry sector is for the establishment of new enterprises through the National Trading Corporation (PERNAS), the Council of Trust for the Indigenous People (MARA), the Urban Development Authority (UDA) and the State Economic Development Corporations (SEDC's). The primary aim of these enterprises is to help train Malays to participate more actively and successfully in commercial and industrial activities.

The focus of expenditures on social services is also on rural development.

Defence expenditure has risen very rapidly over the years as Malaysia is more and more having to look after her own defence. In the First Malaysia Plan over 13 per cent. of the total public development expenditure was scheduled for defence expenses. Under the Second Malaysia Plan this share is set at about 12 per cent.

The sectoral private investment targets for Malaysia are not given in the plan as data for East Malaysia are not available. For West Malaysia investment in perennial crops is expected to be $1,069 m. and in residential construction $810 m. Manufacturing is expected to contribute $1,748 m., agriculture $203 m., mining $304 m., construction $223 m., commerce $912 m. and other activities $906 m., making a total target for West Malaysia of $6,175 m.

Of the private investment target of $7,843 m. for Malaysia, direct government finance is expected to contribute $742 m. A target of $1,150 m. is set for net private foreign investment which is defined to include funds obtained by the government from abroad for re-lending as, for example, the IBRD loans to MIDF. Retained earnings and capital depreciation allowances are expected to total $4,000 m. and equity and loans to make up the balance of $1,951 m.

In its discussion on sources for public development expenditure the Plan uses as its basis the minimum target of $6,000 m. The current surplus of public authorities is expected to finance $1,810 m. of the target, while net domestic borrowing from the non-bank private sector ($2,245 m.) and the banking system ($1,285 m.) is expected to total $3,530 m. External sources are expected to provide $910 m. to be made up of $720 m. of net foreign borrowing and $190 m. of foreign grants. This leaves an excess of $250 m. which is to be added to the accumulated assets of the country.

A surplus of $1,810 m. is projected for the balance of goods and services account for the balance of payments. A deficit of $863 m. for the private transfers account and a surplus of $171 m. for the government transfers account give an expected surplus of $1,118 m. for the current account. Public long-term capital inflow is expected to be $720 m. while the target for private long-term capital inflow is $1,090 m. Monetary and short-term capital movements, including errors and omissions, are, however, expected to show a deficit of $2,928 m.

Sectoral Development Programmes

The conceptual framework for analyzing changes in the composition of physical output among sectors as the per capita income increases has been provided by Kuznets from time-series studies and Chenery from cross-sectional studies.[37] Generally their findings suggest that the share of agriculture in the GDP decreases while that of manufacturing increases as the per capita income increases. The conventional explanation for these structural changes is that the share of food in consumption falls as the per capita income rises, the so-called Engels Law. The modern explanation is that import-substituting industrialization programmes have been instigated successfully as an instrument of diversification.

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[37] Kuznets, *Modern Economic Growth, op. cit.*; H.B. Chenery, 'Patterns of Industrial Growth', *American Economic Review* (September 1960), and H.B. Chenery and L. Taylor,' Development Patterns: Among Countries and Over Time', *Review of Economics and Statistics* (November 1968).

Governments of less developed countries in their desire and haste for economic development have often misinterpreted these structural changes to mean that the per capita income will automatically increase if industrial plants are established. This mistaken belief explains to a large extent the pursuit of industrial development with almost religious fervour in a large number of less developed countries in their early post-independence periods. It also explains largely the widespread failure of such programmes, as countries with neither the requisite natural resources nor the management skills embark upon over-ambitious industrial projects.

Malaysia is an exception in this case as the five development plans formulated so far have all emphasized the agricultural sector. The Draft Development Plan and the First Malaya Plan concentrated largely on the rubber replanting programme and to a certain extent on the development of the rural sector. Thus under the First Malaya Plan the agricultural sector was allocated 23 per cent., or the largest share, of the total public development expenditure. Of this the expenditure for the rubber replanting programme alone came to 60 per cent.

The emphasis on agriculture has been maintained in the Second Malaya Plan, the First Malaysia Plan and the Second Malaysia Plan as it has remained the biggest item of public development expenditure (25.4, 23.9 and 26.5 per cent. respectively). However, the emphasis within the agricultural sector has been changed to land development programmes, especially those carried out by Felda. This has, in effect, meant a change in the choice of crops, for Felda and other land development schemes have a preference for oil palm.

The emphasis on an agricultural strategy of development is justifiable as Malaysia is predominantly an agricultural country. The truth of this statement is brought out very clearly by the figures in Table II.5, which, though hypothetical,

Table II.5

Composition of GDP by Sector of a Hypothetical Economy

Sector	*Contribution to GDP in Period 1*	*Rate of Growth (%)*	*Contribution to GDP in Period 2*
Agriculture	50	5	52.5
Manufacturing	10	20	12.0
Services	40	10	44.0
Total	100	-	108.5

are not unrepresentative of the actual situation in less developed countries with large agricultural sectors. The GDP in period 1 is equal to a hundred units and is made up of 50 units from agriculture, 10 from manufacturing and 40 from services. The rates of growth of these three sectors are 5, 20 and 10 per cent. respectively so that by the second period the GDP has increased to 108.5 units and consists of 52.5 units of agriculture, 12.0 of manufacturing and 44.0 of services. The share of manufacturing in the GDP has increased only to 11.0 per cent. in spite of a 20 per cent. rate of growth. In other words, the contribution of the manufacturing sector to the growth of the overall economy remains small in spite of a very high rate of growth, because its initial share in the GDP is small.

Political factors have also played a part in this strategy for there is a need to accommodate the interests of the politically influential rural Malays. As a result of these economic and political factors the share of public development expenditure going to the industrial sector has been kept low. Starting with the First Malaya Plan the shares are 1.4, 1.2, 2.5 and 8.0 per cent. respectively. The big increase scheduled for the Second Malaysia Plan is misleading as the bulk of it is for encouraging Malay participation in commerce and industry.

The amount of government assistance given to the industrial development programme is, of course, not limited to the provision of public development expenditure for the development of industrial sites and other infrastructural facilities. Subsidies in the form of tax exemption, accelerated depreciation allowances and so forth are also provided under the Pioneer Industries Ordinance of 1958 and the Investment Incentives Act of 1968. However, the lack of coordination in the administrative system and the lack of direction in the choice of industries all suggest that the industrial development programme is not given the priority accorded to industrialization in most other less developed countries.[38]

The principal mining activities are in tin, iron, bauxite and crude oil. In terms of value-added, employment and foreign exchange earned, tin is by far the most important of the minerals. The mining industry is considered to be a declining industry and the amount of public development expenditure scheduled for it has always been kept very low.[39] Thus under the Second Malaya Plan only $1.5 m. was set aside for the programmes of the Mines and Geological Survey Departments, the amounts under the First and the Second Malaysia Plan are $1.2 m. and $0.68 m. respectively.

The transport, utilities and social services sectors have always been accorded a very high priority largely because of the need for rural development. Government and other services are supporting activities and their growth are directly related to the growth of commodities.

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[38] E.L. Wheelwright, *Industrialization in Malaysia*, Melbourne University Press, 1965.

[39] Yip Yat Hoong, *The Development of the Tin Mining Industry of Malaya*, Kuala Lumpur, University of Malaya Press, 1969.

Policy Instruments

Malaysia is following basically a market system so that the main instruments at its disposal are monetary, fiscal, trade and commercial policies. The involvement in the planning process is active but indirect in contrast to the situation in command economies where the government has an active and direct control over the production system.

The role of monetary policy in economic development and development planning is a controversial matter. At one extreme there are the advocates of a passive policy where the main role of the government is the provision of stable monetary conditions. The operational rule is the maintenance of stable prices or a steady but moderate increase in the supply of money in line with the increase in real output. At the other extreme there is the inflationary financing policy, or the South American approach, where the objective is to increase the supply of money at such a rate that the government secures the maximum volume of resources by the inflationary increase in the stock of money.[40]

The monetary policy pursued by the Malaysian government is a near passive one as there has been no attempt to resort to the printing press to finance government deficits. On the whole the available empirical evidence suggests that this is probably the correct policy to adopt though this does not mean that inflationary finance should never be used.

Advocates of the South American approach argue that inflationary financing will reduce the need for restrictive taxation and will therefore encourage economic growth. They also point out that it is good for business and expedites changes in the allocation of factors of production. Moreover, the level of unemployment will be reduced through the Phillips mechanism.[41]

However, empirical evidence does not support such contentions. First, studies conducted in a number of countries do not show any relationship between the rate of real growth and the long-term rate of inflation. Second, countries such as Brazil and Chile which practise inflationary financing seem to have higher unemployment rates than stable-price countries such as Nicaragua. Third, sharp and massive increases or decreases in money supply often result in dislocation and unemployment. On the whole, the weight of the empirical evidence seems to be against the South American approach. No study has been carried out on the Malaysian situation but there is no *a priori* reason for expecting a different result.

At the same time inflation seems to be a relatively inefficient way of taxing the public. People with low incomes tend to hold a larger proportion of cash to income than higher income earners, so that the poorer people feel the incidence of inflationary taxation more. Low income earners also find it more difficult to avoid holding money because of a lack of information about the money market and this in turn worsens the degree of regressiveness.

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[40] See W. Baer and I. Kerstenetzky, eds., *Inflation and Growth in Latin-America,* Homewood, Ill., 1964.

[41] A.W. Phillips, 'The Relationship Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861-1957', *Economica* (1958).

Apart from creating such economic and social problems, inflationary financing would also have a disruptive effective on Malaysian financial institutions. The economy has enjoyed price stability for a long time so that the financial system functions on the basis of a stable price level. Thus contracts are drawn without a built-in element for price adjustment and there is no capital gains tax. In effect, the use of inflationary finance in Malaysia would require the establishment and the learning of new rules among the financial circles.

Another aspect of monetary policy in Malaysia that will receive more attention in the future is the exchange rate. Walters has argued that the size of the foreign exchange reserves and the balance of payments suggests that the Malaysian dollar is undervalued and that this has certain undesirable economic consequences.[42] First, an undervalued currency will import inflation, as happened in Japan and West Germany. About 40 per cent. of the gross domestic expenditure in Malaysia is on imported items and as the prices of these goods go up in the countries of origin so will the cost to Malaysia in terms of Malaysian dollars. If, for example, prices in the UK and the USA were to increase or if the Japanese yen were to be revalued then British, American and Japanese imports into Malaysia would proportionably cost more, *ceteris paribus.* The only way to counter this price increase would be to have a proportionate increase in the Malaysian value-added, but this seems unlikely in view of the smallness of the resource base of the country. There is already evidence to show that the prices of imported items have increased considerably.

Second, an undervalued currency will result in the rapid accumulation of foreign exchange reserves which is undesirable in view of the rapid inflation in countries such as the UK where the Malaysian reserves are kept. For example, if British gilt-edged assets denominated in sterling yield an interest of 7 per cent. and the domestic value of sterling is being depreciated at a rate of 10 per cent., then Malaysia is, in effect, donating to the UK 3 per cent. of the reserves which it holds in the form of sterling claims. Walters has estimated that Malaysia is losing $150 m. per year at the very least by pursuing the present policy as compared to letting the Malaysian dollar float.[43] This is an area in monetary policy where little research has been carried out and concerning which no public discussion has taken place. There is a need to examine the efficiency of the present system in view of the rapid inflation in the industrially advanced countries.

The main weapons of fiscal policy are taxation and expenditure. In Malaysia the important taxes levied are import and excise duties, export taxes, income tax, land tax and sales tax. Import duties have, until recently, been used for revenue-collection purposes. The overall tariffs have been low, rarely exceeding the *ad valorem* rate of 25 per cent. and averaging around 15 per cent. The protective tariff as an instrument of industrial development was not used in the period 1958-70. Subsidies in the form of tax exemption and the provision of infrastructural facilities were used instead. Import and excise duties have no adverse effects on private investment in Malaysia because they can be shifted to the consumers. A large proportion of the total import and excise revenue is obtained from levies on end-product consumer goods which have low price elasticities and/or high income elasticities of demand so that the tax burden can be passed onto the consuming public. The shiftability of the income tax and sales tax is also high. A large number of the industrial sectors in Malaysia are operating under monopolistic conditions and in a sellers' market the scope for shifting the tax burden is wide. The same is true also of the sales tax.

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[42] A.A. Walters, 'Monetary Policy and Economic Development in Malaysia', *Kajian Ekonomi Malaysia* (June 1970).

[43] *Ibid.*, p. 73.

Land taxes are imposed by the state governments at a flat rate per acre on rural and urban land. These taxes are generally low and there is also a large element of shiftability in the urban land tax so that producers are unlikely to be affected by them. The only tax that affects the producers directly and significantly is the export tax. The world demand for Malaysian rubber, tin, copra, palm oil and so on is price elastic so that Malaysian producers can only shift the tax burden at the risk of losing their share of the export market.

The ease with which domestic producers can, as a whole, shift the tax burden onto the consumers does not, of course, mean that the imposition of import and excise duties, income tax, land tax and sales tax does not enable the government to influence the level and composition of private investment. These fiscal measures may well lead to a decrease in the demand for the products of the private sector so that private investment could be adversely affected.[44] In an attempt to offset this adverse effect the Malaysian government has offered various types of fiscal incentives. First, a large proportion of the public development expenditure under the various development plans has been devoted to improvements in the infrastructure of the country. This is a form of subsidy, for the costs of transport, power, water and so on are reduced considerably by such expenditures. Second, grants have been given to the rubber and oil palm industries for replanting purposes and loans are made available under generous conditions to the industrial sector. Third, tax exemption, capital allowances and accelerated depreciation allowances are provided under the Pioneer Industries Ordinance of 1958, the Investment Incentives Act of 1968 and the Investment (Amendment) Act of 1971.

The first two categories of fiscal incentives are generally considered to be necessary and effective in encouraging private investment. The usefulness of the third category, especially the exemption from tax, is, however, less evident. The government has always assumed that all private investors require increased and maximum profits and that a relief from the normal incidence of taxation is the most efficient way of achieving this and hence of maximizing the flow of investment capital. This hypothesis is generally applicable to those small firms which are neither subsidiaries nor associates of large international companies or to firms which have been established primarily to take advantage of the temporary tax concessions. However, it cannot explain the motive of the investment decisions of a large proportion of firms with international interests. Such firms do not base their investment decisions on the maximization of profits *per se* but on minimum rates of return below which investment will not be made. In other words, these firms see their investment not as offensive but rather defensive investment. For these firms tax concessions for projects which at the prevailing tax rates show net profit rates equal to or greater than the minimum acceptable rates cannot in principle be called 'incentives' because the prevailing rates of tax do not constitute a disincentive as such. Direct financial incentives may not, therefore, be necessary at all.

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[44] See C.T. Edwards, *Public Finances in Malaya and Singapore*, Canberra, Australian National University Press, 1970.

Malaysia pursues liberal trade and commercial policies, in line with the overall strategy of developing through the market mechanism. Thus the protective tariff is used only sparingly even though the government has declared its use as a major instrument for industrial development, and the imposition of import quotas is discouraged. Private foreign investment is encouraged, and, as part of the programme to induce such investment, there is complete freedom in the repatriation of capital and the remittance of profits within the sterling area. Some capital transactions with non-sterling area countries are subject to prior approval but such approval from the government is given liberally.

The cautious application of the protective tariff is probably justified for its use would only increase the real output if divergences existed between private and social marginal costs or benefits in the foreign sector.[45] If distortions exist in the domestic consumption, production or factor use then taxes on these items and not taxes or subsidies on the flow of goods from country to country should be imposed. If the latter course of action is taken then the theory of the second best suggests that it may make matters worse.[46]

The decision to encourage foreign investment without any restrictions on the repatriation of capital and the remittance of profits is in the tradition of *laissez faire* development and has probably been one of the major attractions of Malaysia as a centre for investment. However, the cost to Malaysia of such an 'open-ended' system may be high, for every year about $350 m. is recorded as being remitted overseas though the actual amount might be considerably greater. Moreover, the repatriation and remittance have often been carried out without any regard for the interests of the Malaysian economy. Private foreign investment should be encouraged for it brings with it the latest technological advances and management techniques and double-taxation agreements. The latter, whenever made, in effect means a redistribution of income from the countries where the investors come to Malaysia. However, the disadvantages should also be considered and some form of control imposed on the annual outflow of capital.

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[45] H.G. Johnson, 'Tariffs and Economic Development: Some Theoretical Issues', *Journal of Development Studies* (October 1964).

[46] R.G. Lipsey and K. Lancaster, 'The General Theory of the Second Best', *Review of Economic Studies* (1956-7).

Role of the Private Sector

The private sector has always played an important part in the development of Malaysia. The development of the rubber and tin industries in the early part of the twentieth century was due largely to the private sector as was the development of the supporting commercial activities. The establishment of the manufacturing sector in the years after 1957 has also been carried out by the private sector. The government's role has been confined to the provision of industrial infrastructure.

The importance of the private sector in the economy is reflected in the fact that over the decade 1960-70 private investment amounted to $8,440 m. or some 65 per cent. of total investment. At the same time private savings accounted for over 70 per cent. of the total savings of the economy.

The reliance on the private sector as the 'engine of growth' is partly a legacy of the colonial era, partly a result of the conservatism of the ruling Alliance Party and partly the consequence of a deliberate policy to avoid some of the rigidities and incongruities of excessive govermental intervention. Whatever the reason, it is generally accepted that reliance on the market system has given Malaysia one of the highest standard of living in Southeast Asia.[47]

Investment demand depends largely on expectations regarding the growth of the Malaysian economy and on such factors as the overall monetary and fiscal policies, infrastructure development, wage and material costs, the effectiveness of government administration and the growth of the economies of Malaysia's major trading partners. The last factor is, of course, beyond the province of the Malaysian government but for the others policies are pursued with the implicit assumption of providing for the needs of the private sector. Thus conservative monetary and fiscal policies are pursued with the aims of providing financial stability and respectability so as to maintain the confidence of the private sector. Transport and communications, already quite well developed in West Malaysia, are being improved as are industrial infrastructural facilities such as industrial estates and access to the main highways. Industrial relations are relatively good while the imports of intermediate and capital goods receive preferential tariff treatment.

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[47] H. Myint, 'The Inward and Outward Looking Countries of Southeast Asia', *Malayan Economic Review* (April 1967).

In order to encourage the growth of the manufacturing sector tax exemption based on the level of capital expenditure and other incentives are provided first under the Pioneer Industries Ordinance of 1958 and second under the Investment Incentives Act of 1968 and the amended version of 1971. In order to encourage private foreign investment there are no regulations on the repatriation of capital and profits and double-taxation agreements are easily obtainable.

These provisions show that Malaysia is a haven for private investors relative to most other less developed countries in Southeast Asia. However, measures taken recently to increase Malay participation in commerce and industry have caused unrest among business circles and have raised doubts on the continued willingness of the government to play its traditionally indirect role. First, firms are now required to have a labour force that reflects the racial composition of the population. For the majority of firms this means an increase in the intake of Malay employees who are presently perhaps less efficient and experienced than their non-Malay counterparts. This presents an incursion into an area of decision-making that most firms consider to be sacrosanct. Secondly, statutory bodies such as PERNAS and MARA are now actively involved in running their own enterprises. Their aim is to employ Malays and provide them with the necessary experience. The private sector views this as a source of unfair competition and uncertainty for it does not know what areas PERNAS will enter next and what sort of restrictions might then be placed on existing firms. These are legitimate fears which have not been allayed so far.

These direct incursions by the government are based largely on political and social considerations. There are economic reasons for the government to take not a more direct but certainly a more active part in the industrial development programme. The practice of leaving the private sector to get on with its own business has resulted in a multiplicity of firms in areas which could have been adequately served by a smaller number of producing units. For example, the domestic market of Malaysia does not justify the establishment of three dairy product firms, six paint and varnish firms, six plastics firms, three match firms and five pharmaceutical firms.[48] The car assembly industry is another example for there are six assembly plants, associated with twenty-one makes of cars, assembling eighty models for an annual market of about 18,000 cars.[49] Such a proliferation of plants does not enable the industry to obtain the economies of large-scale production. Under-utilization of capital may result and the costs of production increased, a situation that could have been avoided if the government had taken a more active part in the planning of the industrial development programme.

The tendency to let the private sector have a completely free hand has also resulted in certain weaknesses in the programme to attract private foreign investment. First, there is the indiscriminate outflow of large sums of capital mentioned previously and, second, certain foreign firms have made immense profits by charging very high prices for capital and technology and by passing reconditioned second-hand and technologically obsolete machinery as new.

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[48] Wheelwright, *Industrialization in Malaysia, op. cit.*, p. 113.

[49] V. Kanapathy, 'Foreign Investment in Malaysia: Experience and Prospects', *United Malayan Banking Corporation Economic Review* (1970).

Administrative Machinery for Planning and Implementation

A development plan may have been formulated to conform to the characteristics of the economy, be internally consistent and also efficient, but all these would be of no avail if the administrative machinery for planning and implementation were weak.

At the federal level the organization for planning begins with the National Economic Council, a ministerial body under the chairmanship of the Prime Minister, which is the ultimate body responsible for planning in the country. Below the NEC is the National Development Planning Committee (NDPC) which consists of senior public officials and is the body that is directly responsible for the formulation, periodic reviews and implementation of the plan. The NDPC has two sub-committees, one, the Estimates Sub-Committee which is responsible for detailed appraisal and examination of the development estimates as well as the annual phasing of the public development expenditure, the other, the Standards and Costs Sub-Committee which is responsible for formulating and providing guidelines for project designs and standards to ensure that maximum economies are obtained. The NEC and the NDPC are both serviced by the Economic Planning Unit (EPU) of the Prime Minister's Department, so in effect the EPU is the body physically responsible for drafting the development plan.

In its work the EPU is helped by research units in the Treasury, Bank Negara, the PWD, and the Ministries of Agriculture and Lands, Education, Health and Transport. These units are unfortunately less adequately satffed than the EPU in terms of numbers and research experience.

The Development Administration Unit (DAU) is the administrative counterpart to the EPU.[50] To be more specific, the DAU provides advice and guidelines for administrative improvements to ministries and departments. A number of organizations have already been studied and the recommendations have been accepted and are being implemented.

State governments are accorded considerable powers under the Constitution. Thus they have jurisdiction over such natural resources as land, forests, and minerals, which are important for the implementation of national development plans. Close cooperation between the state and federal governments is therefore necessary.

At the moment development planning at the state level is carried out by the State Economic Development Corporations (SEDC's). However, only the SEDC's

[50] Milton J. Esman, *Development and Administration in Malaysia,* Ithaca, Cornell University Press, 1972.

in Selangor and Perak are capable of fulfilling their responsibilities adequately. Those in the other states are poorly staffed. The federal government is taking steps to help state governments overcome the staffing problem with the eventual aim of establishing economic planning units at the state level. In the meantime attempts should be made to increase the awareness of officials of state governments of the national objectives of development plans.

The implementation of the development plans formulated by the above administrative machinery is fairly satisfactory though a number of important weaknesses are obvious. The first is the shortage of technical and managerial staff which is due basically to the shortage of such people in the economy but also partly to the difficulty of recruiting and maintaining the available qualified and experienced staff in government services. For example, the PWD, which acts as the construction agent of the government, is considerably understaffed and shortfalls in its performance will have a multiplier effect on many other programmes.

Another factor which has obstructed the effective implementation of plans is the cumbersome procedures concerning the control of expenditure, commitment of funds, approval of projects and tendering.[51] These procedures are being revised and the ministries and departments concerned are now being delegated more authority to commit funds for the implementation of their projects.

The organization and working procedures of some ministries and departments also leave much to be desired. Poor financial management and accounting procedures have often delayed the decision-making and implementation processes. The lack of coordination between departments within a ministry is another weakness in the administrative machinery for implementing plans.

An Implementation Division has recently been established in the EPU to monitor development plan projects. A General Planning Unit (GPU) has also been established recently with the specific task of providing a continuous review of the government administrative machinery as well as solutions to bottlenecks in the implementation machinery. This is a task which the GPU shares with the DAU and the latter has itself been reorganized recently to improve its own efficiency.

A technique which has been very effective in implementing development projects is based on the establishment of the so-called 'National Operations Room'. This is an adaptation of the method used by the British military establishment in its struggle against the communist terrorists during the Emergency (1948-60). Essentially it is a committee system with four levels of operation, headed by the National Rural Development Committee under the chairmanship of the Minister for National and Rural Development. All of the committees, whether at the national, state, district or village level, meet in the Operations Room which is fully equipped with maps and charts showing the development progress in the nation and in the respective areas.

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[51] *Second Malaysia Plan, 1971-5, op. cit.*, p. 117.

The link between the village committee and the national committee is the *Red Book*. Villagers make their demands felt through their headmen and the suggested projects are then passed on to the district officers and so on until they reach the national level. A large number of discussions, negotiations, and bargaining will have taken place all along the line. Those projects which are large and inter-district in nature will be incorporated into the national development plan and carried out by the PWD. The smaller projects such as public wells, small bridges and rural roads, collectively termed the 'Red Book Plans', will be carried out by the district officers with funds from the Ministry of National and Rural Development.

The National Operations Room technique of planning thus provides an easy channel of communication between the different groups of decision-makers and enables the different strata of society to identify themselves with the objective of the development plan. Regional and local operations rooms also serve as stopping points for the Minister of National and Rural Development during his many inspection tours of development projects. In all, the National Operations Room technique is a most effective method of keeping in touch and controlling the many projects contained in a development plan.

SECTION III

MAJOR PROBLEM AREAS

Technical Problems of Planning

The choice of a model for development planning depends basically on three factors. First, the model should conform as much as possible to the unique structural conditions of the country. Second, there is the question of the availability of reliable statistical data, that is, the choice should be subject to the data constraint. The third factor is the planner's own theories about the main bottlenecks in the economy. These theories are often subjective and are the result of the planner's place of training.[52]

Economic plans in Malaysia are based on the aggregate Harrod-Domar model. The reasons for questioning the usefulness of this model for planning in Malaysia have already been mentioned and need not be repeated here.[53] However, even if the model were representative of the structural conditions of Malaysia, its usefulness would be reduced considerably by the shortage of reliable statistical data. The application of the Harrod-Domar model of growth requires a measure of the ICOR that is calculated from data on net investment for the ICOR measures, in principle, the amount of aggregate investment required to generate a unit increase in the GNP. Gross investment, which includes the depreciation of capital, should not be used in the calculation of the ICOR, as replacement investment is not technically or behaviourally related to changes in the net productive capacity of the economy. This conceptual weakness would present no problem if the ratio of replacement to net investment were constant over time. However, this ratio changes over time because of changes in the annual rate of increase in the gross investment and changes in the average lifespan and productivity of capital goods.[54] Data on the aggregate net investment of Malaysia are available but these have been calculated on the assumption that the capital stock depreciates at an annual rate of 3 per cent. This is a purely arbitrary assumption and can only serve as a very rough approximation of the actual rate of depreciation which undoubtedly varies considerably in response to changes in the age and composition of the capital stock. As such the ICOR calculated may contain a large margin of error and result in grossly inaccurate predictions on the capital requirements for a target rate of growth in income.

Three attempts have been made so far to estimate the aggregate ICOR for

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[52] See G. Myrdal, *Economic Theory and the Underdeveloped Regions*, London, Duckworth, 1957, and *Asian Drama, op. cit.*

[53] See Section II.

[54] Pierre R. Crosson, *Economic Growth in Malaysia,* Washington, National Planning Association, 1966, p. 57.

Malaysia. The first study, carried out by Snodgrass for the period 1955-63, is not very helpful as gross investment figures were used.[55] The second study, by Crosson for the same period, presented ICOR's based on ratios of three-year and five-year moving sums of investment and output.[56] However, the investment figures also included replacement investment. The third study, by Abraham and Gill for the period 1961-6, was more satisfactory as it assumed separate annual depreciation rates for machinery and equipment (10 per cent.), building and construction (4.0 per cent.), and perennial crops (4.5 per cent.), the three main categories in which the aggregate capital stock was presented.[57] The basis for the choice of the depreciation rate was the lifespan of the asset. While the use of net investment figures was a distinct improvement, the estimates by Abraham and Gill are also to be questioned as the authors, like Snodgrass and Crosson, adopted a very simple gestation formula. Table III.1 presents the findings of the three studies in summary.

Table III.1

Estimates of Aggregate ICOR for Malaysia for various periods

	Snodgrass (1 year lag)	*Crosson 3-year moving average*	*Crosson 5-year moving average*	*Abraham and Gill (1 year lag)*
1955	–	–	–	–
1956	3.7	–	–	–
1957	5.0	3.9	2.6	–
1958	31.5	1.9	3.1	–
1959	2.9	1.8	2.9	–
1960	1.2	2.7	2.3	–
1961	2.4	4.6	3.3	1.4
1962	3.2	3.3	–	2.0
1963	2.7	–	–	1.9
1964	–	–	–	3.2
1965	–	–	–	1.5
1966	–	–	–	2.2
Average	2.8	n.a.	n.a.	2.0

Sources: As indicated in the text.

Note: Snodgrass used GDP at 1960 factor cost, Crosson GNP at current prices and Abraham and Gill NDP at 1964 market prices for the denominator.

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[55] Donald R. Snodgrass, 'Capital Stock and Malayan Economic Growth: A Preliminary Analysis', *Malayan Economic Review* (October 1966).

[56] Crosson, *op. cit.*

[57] W.I. Abraham and Mahinda Singh Gill, 'The Growth and Composition of Malaysia's Capi-

Three further points need be made about the estimates given in the table. First, they are relatively low compared to those obtained in other underdeveloped countries with more reliable statistical data. Second, there is a high degree of fluctuation in the estimates obtained even by the five-year moving average method, so that the room for over- or under-estimating the capital requirements for a given rate of income growth is great. Third, accurate forecasting further requires ICOR's by sector. The study by Snodgrass, unsatisfactory though it is, does illustrate the point that sectoral ICOR's are very different: perennial crops, 5.2; dwellings, 12.1; public sector, 6.1; and private sector, 1.2.[58] This means that an overall figure will not be adequate for planning purposes.

The need for more detailed information on the capital stock and its rate of depreciation is therefore clear if further reliance on the Harrod-Domar model of growth is envisaged. However, it can be argued that the Harrod-Domar model should no longer form the basis for development plans as it does not conform to the characteristics of development in Malaysia. The question then becomes not merely one of collecting more detailed and more accurate data but also one of deciding what data to collect.

One area in which efforts should be concentrated is national accounts statistics. The Department of Statistics started publishing these in 1955 and six volumes in a series of reports on the national accounts of West Malaysia have been published so far. The latest volume, which covers the period 1960-7, cannot really be compared with the earlier five volumes as it contains major revisions made possible by the more reliable and comprehensive range of statistical data available. In particular, the findings of the 1966 Census of Distributive and Catering Trades have made possible a more accurate estimate of the value-added of the tertiary sector.[59] An unpublished report continues the series on the same premises to 1970[60] so that there is a consistent series for the period 1960-70. The other consistent series, but calculated on different premises, is for 1955-66. There is a need to extend the 1960-70 series backwards, to 1955, and perhaps even further to 1947, as such a time-series would prove invaluable for analysis on structural changes in the economy. Some data on the national accounts of West Malaysia and Singapore combined are available for the period 1947-54.[61] It would be useful to see whether the data can be broken down on somewhat less heroic assump-

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tal Stock', *Malayan Economic Review* (October 1969).

[58] Snodgrass, *op. cit.*, pp. 80-1.

[59] Malaysia, Department of Statistics, *National Accounts of West Malaysia, 1960-7*, Kuala Lumpur, 1971.

[60] Malaysia, Department of Statistics, '*Data for the IMF Consultations, 1971*', Kuala Lumpur, 1971.

[61] F. Benham, *National Income of Malaya, 1947-9, with Estimates for 1950*, Singapore, Government Printing Office, 1951.

tions than those made by Lim Chong-Yah[62] to obtain the West Malaysian share. A modified version of the Beckerman and Bacon technique might even be used for this purpose.[63]

Another area in which immediate work should be carried out is statistics on the extent of interdependence in the economy. Two input-output tables for West Malaysia have already been published, one for 1960 (29 x 29 sectors) and the other for 1965 (30 x 30 sectors).[64] However, the accuracy and the reliability of these two tables leave much to be desired. Moreover, they have been constructed along conventional lines which, given the largeness of an export sector dominated by rubber and tin and the smallness of a narrowly based industrial sector, rather limits their usefulness for the inter-industry programming approach to development planning in Malaysia.

There is a need to construct an input-output table that reflects the structural characteristics of Malaysia. An example of how this can be done is provided by the modified input-output table designed by Seers for use in Jamaica, Ghana and Zambia.[65] The Seers input-output table is simpler in many of its aspects than the conventional Leontief table partly because of the lack of data in less developed countries but largely because of the relative simplicity of the structures of such economies. However, it contains considerably more information on governmental revenues and expenditures and on foreign trade. Government finance is emphasized because of the important role played by governments in development programmes. A large number of less developed countries, as for example Malaysia, are heavily dependent on foreign trade and a detailed picture of the interrelationships between domestic industry and the rest of the world is necessary for the formulation of an effective diversification programme.

An example of such a modified input-output table is given in Table III.2.[66] The first point of interest about the table is that the functions of the row and column have been reversed as compared to a conventional Leontief table. The rows here show the purchases of inputs of each industry from the various other industries, while the columns show the way in which the intermediate sales of each industry are allocated among the other industries. The second interesting point is the lack of a column for each and every industry which has a row. This is

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[62] Lim Chong-Yah, *Economic Development of Modern Malaya*, Kuala Lumpur, Oxford University Press, 1967.

[63] See Section I.

[64] Malaya, Department of Statistics, *National Accounts of the States of Malaya, 1955-61*, Kuala Lumpur, undated; Malaysia, Department of Statistics, *Inter-Industry Accounts for West Malaysia, 1965*, Kuala Lumpur.

[65] Dudley Seers, 'An Accounting System for a Specialised Exporter of Primary Products' (mimeo.).

[66] This is taken from B. Van Arkadie and C. Frank, *Economic Accounting and Development Planning*, Nairobi, Oxford University Press, 1966.

Table III.2

Hypothetical input-output table

$ million	BASIC INPUTS							VALUE ADDED											COMPOSITION OF SUPPLY					COMPOSITION OF D				
								Employees Income				Mixed Income		Income Payments												Consumption		
	Imports	Import Duties	Electricity and Water	Transport and Communication	Distribution	Other Inputs	Total Inputs	Non-Citizens	Citizens	Subsistence	Direct Tax	Non-Citizens	Citizens	Home	Abroad	Transfers	Savings and Depreciation	Total Value Added	Gross Output	Imports Final (c.i.f.)	Distribution	Indirect Tax	Total Supply/Demand	Sales to Other Sectors	Exports	Non-African	Subsistence	Other Citizens
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1. Mining	20.5	0.5	6.5	1.3	0.1	4.1	33.0	21.6	12.2		23.5			2.3	23.1		15.1	97.2	130.2				130.2	-1.4	-113.8	-1.8		-0.6
2. Agriculture	1.2			0.1	0.3	1.4	3.0	0.8	1.9	20.8		2.6	3.8					29.9	32.9	0.8	2.4		36.1	-5.8	-4.6	-1.2	-20.8	-1.9
3. Food and Beverages	3.8	0.1	0.1	0.1		5.3	9.4	0.7	0.6		0.7			0.1	0.1		1.2	3.4	12.8	10.9	2.6	2.1	28.4	-0.6	-0.4	-12.2		-13.8
4. Textiles	0.8						0.8	0.1	0.2									0.3	1.1	10.1	2.4	0.6	14.2		-0.1	-5.6		-8.1
5. Metal Manufacturing	3.2	0.1		0.1	0.2	0.4	4.0	1.5	0.9		0.5	0.3	0.2				0.5	3.9	7.9	18.2	4.3	0.7	31.1	-5.4	0.2	-5.2		-2.0
6. Other Manufacturing	1.2			0.2	0.1	1.1	2.6	0.9	0.9		0.3				0.1		0.4	2.6	5.2	9.1	2.0	0.7	17.0	-3.4	-0.7	-6.3		-3.4
7. Construction	8.4	0.2		0.6	1.6	3.7	14.5	3.5	3.6		0.1	0.5	0.5		0.1		0.4	8.7	23.2			0.1	23.2	-0.9				
8. Electricity and Water	1.3		0.9	0.1	0.1		2.4	0.5	0.3					1.4	1.1		1.4	4.7	7.1	1.0			9.1	-6.8		-1.0		
9. Transport and Communication	1.0				0.1	0.8	1.9	4.1	1.7		0.2	0.3	0.5	0.3	1.5		1.9	10.5	12.4			0.6	13.0	-4.6	-5.3	-0.7		-1.0
10. Distribution			0.1	2.1		1.3	3.5	5.3	1.8		1.0	2.0	0.6	0.7	0.2		2.0	13.6	17.1			0.2	17.3	-16.2		-0.2		-0.2
11. Goverment Services								7.8	5.4									13.2	13.2				13.2					
12. Other Services			0.1			0.6	0.7	4.0	4.3	5.2	0.6	4.4	0.3	-1.8	0.4		1.1	18.5	19.2	6.6		1.3	27.1	-2.1		+16.1	-5.2	-3.6
13. Intermediate Products			-7.7	-4.6	-2.5	-18.7	-33.5												-33.5		-13.7		-47.2	+47.2				
14. Rest of World	-41.4						-41.4								-26.7	+1.6	-3.0	-28.1	-69.5	-56.7			-126.2		+125.1	+1.1		
15. Government Current A/C		-0.9					-0.9				-26.9	-2.2		-3.2	+0.3	-1.9	+17.0	-16.9	-17.8			-6.3	-24.1					
16. Households: Non-Citizens								-50.2				-7.9		+0.2	-0.2	+0.3	+8.6	-49.2	-49.2				-49.2			+49.2		
17. Households: Citizens									-33.8	-26.0			-5.9				+5.1	-60.6	-60.6				60.6				+26.0	+34.6
18. Savings and Investment																	-51.7	-51.7	51.7				-51.7					

Table III.2

Hypothetical input-output table

VALUE ADDED									COMPOSITION OF SUPPLY					COMPOSITION OF DEMAND								
		Mixed Income		Income Payments												Consumption				Capital Formation		
Subsistence	Direct Tax	Non-Citizens	Citizens	Home	Abroad	Transfers	Savings and Depreciation	Total Value Added	Gross Output	Imports Final (c.i.f.)	Distribution	Indirect Tax	Total Supply/Demand	Sales to Other Sectors	Exports	Non-African	Subsistence	Other Citizens	Government Consumption	Government	Others	Change in Stocks
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	23.5			2.3	23.1		15.1	97.2	130.2				130.2	-1.4	-113.8	-1.8		-0.6	-0.1		-5.6	-6.9
20.8		2.6	3.8					29.9	32.9	0.8	2.4		36.1	-5.8	-4.6	-1.2	-20.8	-1.9	-0.5		-0.2	-1.1
	0.7			0.1	0.1		1.2	3.4	12.8	10.9	2.6	2.1	28.4	-0.6	-0.4	-12.2		-13.8	-1.2			-0.2
								0.3	1.1	10.1	2.4	0.6	14.2		-0.1	-5.6		-8.1	-0.4			
	0.5	0.3	0.2				0.5	3.9	7.9	18.2	4.3	0.7	31.1	-5.4	0.2	-5.2		-2.0	-0.8	-7.2	-10.2	-0.1
	0.3				0.1		0.4	2.6	5.2	9.1	2.0	0.7	17.0	-3.4	-0.7	-6.3		-3.4	-3.3			0.1
	0.1	0.5	0.5		0.1		0.4	8.7	23.2			0.1	23.2	-0.9					-2.8	-1.0	-18.6	
				1.4	1.1		1.4	4.7	7.1	1.0			9.1	-6.8		-1.0			-0.3			
	0.2	0.3	0.5	0.3	1.5		1.9	10.5	12.4			0.6	13.0	-4.6	-5.3	-0.7		-1.0	-1.4			
	1.0	2.0	0.6	0.7	0.2		2.0	13.6	17.1			0.2	17.3	-16.2		-0.2		-0.2				-0.7
								13.2	13.2				13.2						-13.2			
5.2	0.6	4.4	0.3	-1.8	0.4		1.1	18.5	19.2	6.6		1.3	27.1	-2.1		+16.1	-5.2	-3.6	-0.1			
									-33.5		-13.7		-47.2	+47.2								
					-26.7	+1.6	-3.0	-28.1	-69.5	-56.7			-126.2		+125.1	+1.1						
	-26.9	-2.2		-3.2	+0.3	-1.9	+17.0	-16.9	-17.8			-6.3	-24.1						+24.1			
		-7.9		+0.2	-0.2	+0.3	+8.6	-49.2	-49.2				-49.2			+49.2						
-26.0			-5.9				+5.1	-60.6	-60.6				60.6				+26.0	+34.6				
							-51.7	-51.7	51.7				-51.7							+8.2	+34.6	+9.1

due partly to the lack of data but more importantly to the need to avoid an unnecessary waste of time and manpower. Less developed countries have simple inter-industry structures because of their small industrial sectors and because such sectors are dominated by industries which cater for final uses and which use mainly primary factors and imports as inputs. To devote time and effort to the construction of detailed inter-industry transactions under such conditions would present a questionable use of scarce resources.

The table permits a detailed analysis of government finance by the inclusion of Columns 2, 11 and 22 and Row 15. Transactions with the rest of the world are also well articulated by the inclusion of Columns 1, 15, 16, 17, 20, 25 and 26 and Row 14. The existence of a large expatriate population, whose consumption patterns are quite different from those of the local population, requires the breakdown of salaries and wages into local income (Column 8) and foreign income (Column 9). The existence of a large non-monetized sector necessitates the inclusion of a separate value-added item for subsistence income (Column 10).

These are the main distinguishing features of the Seers input-output table for less developed countries. There is a need to construct an input-output table for Malaysia which incorporates these features. The shortage of data should no longer be a constraint as the table is designed with this shortage in mind. If there is a constraint it is more likely to be one of usage.

Political Constraints

Every country faces political constraints in the formulation and implementation of its development plans. In Malaysia the problem is perhaps slightly more acute because of the peculiar historical background which has resulted in the economically backward ethnic group having the political power to redress the economic imbalance.[67]

It is beyond the scope of this study to present a comprehensive list of all the areas in development planning where political constraints have impinged upon decision-making. What is intended is no more than a brief discussion of the role of political factors in one area of development in Malaysia, that of the formulation and implementation of land development programmes by Felda.

Felda was established in 1956 with the aim of providing land for the landless through the establishment of comprehensive land schemes. It opens up areas of land between 4,000 and 5,000 acres each, plants them with rubber or oil palm and provides them with rural roads, water, dwellings, schools, health centres, drainage and irrigation, processing plants and road links with the main highways. Each scheme is to accommodate 40 families and if the main crop is rubber then each family will get ten acres, eight of which will be planted with rubber and the rest with rice or fruit trees. If the preference is for oil palm then each family will be provided with twelve acres, ten of which will be planted with the main crop.[68]

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[67] See Section I.

[68] Taib bin Haji Andak, *The Work of the Federal Land Development Authority*, Kuala Lumpur, Felda, 1964.

In the first ten years of its operation Felda concentrated on schemes smaller than 5,000 acres. In 1966 the Jengka Triangle Project, a massive land development scheme covering over 330,000 acres in Pahang, was launched but this is being developed along conventional Felda lines, that is, it is being operated by individual smallholders grouped into settlement units, each growing a simple crop.[69]

Felda started out with three organizational goals. First, it was concerned with the provision of physical amenities and the improvement of the rural infrastructure, the so-called output goal. Second, it was interested in changing the values of the rural population by increasing their participation in their own development. This is the so-called cultural output. Third, it was concerned with changing the structure of the rural economy by the extension of credit, technical assistance and rural education, the so-called mixed output-cultural goal.

These three goals were given equal importance in the initial stages of the programme but political factors resulted very quickly in the abandonment of the cultural goal. In the early years of the programme the settlers were required to participate fully in the initial development, from the felling of trees to the planting of the crops and the construction of the houses. This attempt at fostering the concept of self-help was soon abandoned. In 1958 the job of jungle-clearing was contracted out. By 1960 the contract work had been extended to the planting of the main crop, the construction of the houses and even to the provision of maintenance to the settlers for the few months before remunerative work on the scheme could begin.

The political power and the rising expectations of the rural Malays had demanded quick results and the original scheme had not been able to proceed at the required speed. The fostering of the concepts of self-help and self-reliance, which Felda had originally recognized to be important ingredients of the development process, was holding up the programme and the cultural goal had therefore to be neglected. Today Felda is concerned primarily with the output goal and assessments of the organization centre on its ability to achieve target acreages of development. Indeed the whole process had come full circle in a rather ironical way. The comprehensiveness of the programme, seen at one point as the consequence of political necessity, is now being criticized as the cause of the inability of Felda schemes to benefit more than a small proportion of the rural Malay population. The argument is that the cost of an acre of land developed by Felda is very high and that a much larger number of the landless peasants would have been settled if Felda had simply designated suitable areas of land for farming and limited its role to the provision of economic and social overheads. At the same time the more enterprising of the settlers would not have been hindered from expanding by the artificial acreage of the present schemes, while the less enterprising settlers would have had to bear a smaller repayment load and would have been able to spend according to their respective capacities.

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[69] Tippetts, Abbett, McCarthy, Stratton and Hunting Technical Services Ltd., *The Outline Master Plan: Report on the Jengka Triangle Project for the FLDA*, Report submitted to the FLDA, October 1967.

Socio-cultural Constraints

When targets set in development plans are not achieved, planners are apt to say that the cause lies in political interference and in the socio-cultural rigidities of the population. The possibility of selecting the wrong economic model and of making unrealistic assumptions is seldom admitted. In Malaysia the scope for apportioning blame to socio-cultural constraints is great as there is a ready-made candidate in the form of a Malay-dominated subsistence sector.

Rural Malays are often said to believe in the dominance of the universe by animistic and demonic forces so that they find it difficult to believe in their own ability to master the environment.[70] It has also inhibited the growth of a scientific orientation towards life as can be seen in the reluctance to give up the past and in the fear to face the unfamiliar. It has further been claimed that there is a tendency to assign certain occurrences to certain spirits and to have certain prescribed methods of placating them. Such practices are based on 'a desire to expect what is seen and to see what is expected'.[71]

These beliefs, together with that of *rezeki*, a person's divinely inspired economic lot,[72] may have resulted among the rural Malays a reluctance to change and to adapt to modern conditions and techniques of production. This reluctance, it is argued, will make the effective implementation of rural development programmes more difficult. It would also hinder the government's programme to encourage greater Malay participation in commerce and industry.

This view is, however, unsatisfactory as it ignores the neglect that the rural Malays had suffered under British colonial rule and the disincentive that they felt under the traditional feudal Malay society. The economic system under British colonial rule was designed to benefit the interests of the big commercial concerns and the immigrant Chinese and Indian workers, at the expense of the interests of the rural Malays.[73] There was also the paternalistic belief that the Malays were not capable of benefiting from an enlightened progressive system of secular instruction. As a result they were given a religious education which did not equip them for employment in the modern sector.

Under the feudal system the cultivator or tenant had to pay a proportion of his output as well as to perform other duties for the right to cultivate the soil and to live on it. Such conditions would have discouraged the farmers from making any improvements to the land or from adopting new techniques of production. The motivation for improvement would have been adversely affected too by the contradictions that exist in the economic structure of the feudal society.[74] Take the case of *zakat*, the Islamic premise on the redistribution of accumulated wealth. In specific terms, *zakat* is the right of the community to the wealth acquired by an individual and is enforceable by law. It is a noble concept but in reality it works against those who are least able to pay, for it specifies that the cultivator rather than the owner of the land has to redistribute his accumulated wealth. Where tenant farming is as prevalent as it is in Malaysia, *zakat* really serves to widen the big disparity that already exists between the income levels of the landlords and the tenants.

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[70] Hussein Alatas, 'Collective Representations and Economic Development', *Kajian Ekonomi Malaysia* (June 1965).

[71] B.K. Parkinson, 'Non-economic Factors in the Economic Retardation of the Rural Malays', *Modern Asian Studies* (1967), p. 38.

[72] M.G. Swift, *Malay Peasant Society in Jelebu*, London, LSE, 1965 (London School of Economics Monographs on Social Anthropology) p. 29.

[73] Ungku A. Aziz, 'Poverty and Rural Development in Malaysia', *op. cit.*

It is certain that the basic cause of poverty in the rural sector is a combination of the factors mentioned above. No judgment of the relative importance of these factors is intended here. The purpose is only to present a number of sociological, psychological and cultural factors that might impinge upon decision-making in the rural development programme.

Administrative Obstacles

The bureaucratic machinery that independent Malaysia inherited from the colonial civil service in 1957 had integrity, discipline and organizational coherence. Its ability to perform the traditional administrative functions of office-work, routine public services and control over public expenditures was never questioned. However, it was lacking in its ability to formulate and implement a programme of massive economic development in the country. In other words, it failed as a development administrative unit.

The functions of such an administrative unit can be divided very conveniently into four categories.[75] The first is concerned with the shaping of policies, the allocating of funds and the formulation of development plans. The second function is the managerial one of ensuring the optimum utilization of scarce resources. The third is concerned with changing the attitudes and behavioural patterns of individuals and groups in line with the stated objectives of development planning and the fourth is a political function, solving or regulating the conflicts that may arise among individuals and groups as a result of public programmes.

Initially the Malaysian administrative machinery was deficient in all the four areas. The establishment of the National Economic Council, the National Development Planning Committee and the Economic Planning Unit as well as the establishment of research and planning units in the major ministries helped to overcome the weaknesses in the first two areas to a certain extent. The establishment of the Development Administration Unit has further improved the efficiency of the planning process for it has led to reforms in four central government-wide processes. The first is the manpower or personnel system which deals with recruitment, placement, training, promotions, incentives and other important elements concerning members of the civil service. The second is the financial system which is concerned with the methods and criteria for mobilizing, allocating, controlling and accounting for public funds. The third central government-wide process is the logistics system which deals with the procurement of supplies and equipment and their maintenance and use, while the fourth is the organization system which is concerned with the management of the administrative machinery itself.[76] Some of the important reforms carried out by the Development Administration Unit in these four areas were mentioned in the earlier discussion on the administrative machinery for planning and implementation.[77]

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[74] S.D. Gordon, 'Contradictions in the Malay Economic Structure', *Intisari* (1963).

[75] Esman, *Administration and Development in Malaysia, op. cit.*, pp. 2-3.

The social and political functions of a development administrative unit are of special importance in Malaysia where economic dualism exists along racial lines and where there is no institution for effectively accommodating the interests of the Malays and the non-Malays as political parties are organized strictly along communal lines. The administrative machinery is, however, deficient for these two functions but its senior members possess the qualifications to become what Esman has called 'conflict managers'.[78] First of all, the transition from colonialism to independence in Malaysia has not resulted, unlike the situation in many other less developed countries, in the politicization of the civil service, so that the administrative machinery has retained its image of a neutral and independent unit. Second, the senior members of the civil service, because of their cosmopolitan educational backgrounds, are the least parochial of the elite groups in the country. As professional people they deal with problems that cut across occupational and racial lines and are therefore well-versed in the act of accommodating conflicting interests.

Esman has argued that Malaysia's political leaders have moved away from the 'avoidance model', where public discussions of communal issues are avoided, to the 'guidance model', where the existence of racial conflicts is admitted and where alternative courses of action are designed in anticipation of such conflicts. However, the political system by itself is not in a position to play a useful part in this new framework because political parties have to appeal to communal interests to obtain electoral support. Esman has suggested that the administrative machinery should re-orientate itself and take an active part in what he has called the 'management of communal conflict'. The reasons are compelling for there is no other elite group that can fill this institutional gap and the senior members of the civil service possess the cosmopolitan and liberal background necessary for performing this difficult function.

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[76] *Ibid.*, p. 148.

[77] Section II.

[78] Esman, *op. cit.*, Chapter 8.

Esman's suggestion that senior civil servants be made the 'mandarins' of the communal problem in Malaysia is interesting but the implementation of the scheme would encounter at least two problems. The first is the adverse reaction that can be expected from the politicians for the scheme would encroach upon their spheres of interest and influence. The second is the effect that the new and more activist role would have on the civil service itself. It can be argued that the civil service has been able to maintain its integrity, discipline and organizational coherence because of its strictly non-political function. Involvement in the management of communal conflict might result in the loss of these characteristics and therefore the respect of the population.

Infrastructure Constraints

One of the most important bottlenecks in the implementation of development plans in Malaysia is the shortage of technical and managerial personnel. It has already been noted that the development expenditure programmes of the public sector have often been held back because of serious manpower shortages. The investment programmes of the private sector have also been similarly affected.

Table III.3 shows the vacancies reported for various categories of skilled personnel as well as the level of employment in them and the number of the employed that is accounted for by expatriates and under-qualified West Malaysians for the year 1965. The shortage of skilled manpower in the country is brought out very sharply by these figures. For example, in 1965 the number of managers employed was 5,144 of which 1,097 or over 21 per cent. was filled by expatriates or West Malaysians who were considered under-qualified for managerial positions. At the same time there were 118 vacancies for managerial posts. The situation for technologists was even worse for nearly 25 per cent. of the 3,304 technologists employed were either foreigners or under-qualified West Malaysians and the number of vacancies constituted nearly 15 per cent. of the prevailing number of technologists employed.

The irony of the employment situation in West Malaysia is that unemployment seems to have worsened directly in relation to the level of formal education over time. Table III.4 shows that while the number of unemployed among those with no formal education declined from 38 to 30 thousands, that among those with a primary education went up from 72 to 126 thousands over the period 1962-67. The deterioration is also noticeable among those with secondary and post-secondary education.

The conclusion that can be drawn from the two tables is that the current system of education in Malaysia largely 'ignores the fact that at some point in the future students have to earn a living'.[79] Three reports on the educational

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[79] Malaysia, Ministry of Education, *Education in Malaysia, Vol. I*, Kuala Lumpur, 1971, p. 1.

Table III.3

Vacancies, Employment and Expatriate and Under-qualified Manpower by Category of Skilled Occupation in West Malaysia, 1965

Occupation	*Employment*	*Expatriate and under-qualified manpower*	*Vacancies*
Managers	5,144	1,097	118
Technologists	3,304	808	346
Teachers with higher education	2,975	671	923
Other professionals	1,751	649	180
Junior executives	6,784	478	230
Teachers	52,618	1,409	1,900
Technical sub-professionals	9,247	236	1,326
Craftsmen	85,674	-	n.a.
White-collar workers	51,739	-	n.a.

Source: Malaysia, Economic Planning Unit, 'The Employment Problem in West Malaysia, 1962-75' (Unpublished document).

Table III.4

Unemployment by Level of Formal Education ('000)

	1962	1967
No formal education	38	30
Primary education	72	126
Secondary education without School Certificate	29	67
School Certificate and above	8	12

Source: *Ibid.*

system have been published: the Report of the Education Committee of 1956, under the chairmanship of Tun (then Dato) Razak, the Report of the Education Review Committee of 1960 under the chairmanship of Abdul Rahman bin Talib and the Report of the Higher Education Planning Committee of 1967.[80] The first two studies did not contain any manpower planning in the sense of recommending an educational structure that conforms with the employment structure. The third report is conceptually more satisfactory for it recognizes that education has to be provided not haphazardly but in accordance with some pre-determined objectives and targets. To be more specific, it considered three methods of assessing educational requirements before arriving at its recommendations. These are the manpower planning approach, the Harbison and Myers and the UNESCO indices of human resource development,[81] and the so-called 'formula approach' which is based on the Robbins principle that courses of higher education should be made available to those who are qualified and who desire to pursue them. However, the report, as a whole, leaves much to be desired and it appears that 'a very wide gulf exists between the concepts available from theory and that which had been actually applied'.[82]

West Malaysia does not suffer from a significant shortage of physical infrastructural facilities. Transport, communications and utilities are relatively well developed and provide adequate accessibility to new development areas as well as a satisfactory base for the public administrative system. This is the result partly of the colonial economic system for the export sector then was adequately served by a network of roads and railways and other infrastructural facilities needed for the smooth operation of the rubber and tin industries. It is also partly the result of a deliberate policy on the part of the government after independence in 1957 to provide adequate infrastructural amenities for the rural sector.

The situation in East Malaysia is quite different. The road and rail networks are poor, the only form of communication between towns is either by air or by sea. East Malaysia also suffers from a labour shortage at all levels of the employment stratum so that physical and human infrastructural constraints are an important bottleneck in the implementation of the various development plans.

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[80] See Francis Wong and Gwee Yee Hean, *Perspectives: The Development of Education in Malaysia and Singapore*, Kuala Lumpur, Heinemann Educational Books (Asia) Ltd., 1972.

[81] F.H. Harbison and C.A. Myers, *Education, Manpower and Economic Growth: Strategies of Human Resource Development*, New York, McGraw-Hill, 1964, and UNESCO, *An Asian Model for Educational Development Perspectives for 1965-80*, Paris, 1966.

[82] Eddy Lee, *Educational Planning in West Malaysia*, Kuala Lumpur, Oxford University Press, 1972, p. 52.

SECTION IV

ROLE OF THE UNIVERSITY

Development of Higher Education

The educational system of Malaysia can be divided conveniently into four stages: the primary, the lower secondary, the upper secondary and the post-secondary. Primary education is provided free, in the limited sense that no school fees are charged, for six years beginning at the age of six in three language streams: Malay, Chinese and Tamil. It was decided in July 1969 to stop providing English-medium instruction to those entering the first year of primary school in 1970. The existing English-medium schools are to be converted into Malay-medium schools progressively as the entrants in 1970 work their way up the educational ladder.

On completion of the primary education students are automatically allowed to pursue a three-year lower secondary education in either Malay or English. At the end of this period, a public examination, the Lower Certificate of Education, is set and the performance in this examination decides whether a student proceeds to the fourth year of secondary education. In 1970 42 per cent. of those who sat for the Lower Certificate of Education went on to further their secondary education.

At this point there is a choice between continuing the upper secondary education in the main 'academic' stream described so far or in technical and vocational schools. For those who choose the former the next public examination is the School Certificate, which is taken at the end of the second year of upper secondary education. A small proportion, around 12 per cent., of these then proceeds to the sixth form where the Higher School Certificate is taken at the end of the second year. Those who obtain the required passes and qualifications then go on to the university.

The holders of the Lower Certificate of Education who opt for the 'non-academic' stream have a number of choices. First, there are the upper secondary technical schools where students can take the School Certificate and then proceed either to do a two-year teacher training course which would qualify them to teach at lower secondary schools or to take the Higher School Certificate and then to university, or to pursue diploma courses at technical colleges. Second, holders of the Lower School Certificate can do a three-year teacher training course which would qualify them to teach at the primary level. Third, there are the upper secondary vocational schools which prepare their students for the Malaysian Vocational Certificate examination.

Among the technical colleges in Malaysia the most well known are the Technical College, the College of Agriculture and the MARA Institute of Technology. The Technical College provides a three-year course leading to the award of the college diploma in, among other things, Architecture, Civil, Electrical and Mechanical Engineering, Surveying and Town and Country Planning. It also prepares students for examinations conducted by such professional bodies as the Royal Institute of British Architects, the Institute of Civil Engineers and so on. The Technical College has recently been given university status and is now renamed the National Institute of Technology.

The College of Agriculture provides a three-year diploma course in such basic agricultural disciplines as Agricultural Economics, Animal Husbandry, Plant Protection and Farm Management. It has been upgraded to the Agricultural University and the Faculty of Agriculture at the University of Malaya is being incorporated into the new framework.

The MARA Institute of Technology is similar to the Technical College in that it prepares students for its own diplomas as well as for professional examinations of various British educational institutions. However, its main area of specialization is in management science at both the professional and sub-professional levels. When fully completed the institute will be able to offer courses in seven areas: Accountancy, Administration and Law, Business and Management, Applied Arts, Applied Science, Engineering and Land Surveying, and Computer Science, Statistics and Actuarial Science. There is also a school for preparing students for entrance into universities.

Apart from the three technical colleges mentioned above, there are also the Tungku Abdul Rahman College and the Ungku Omar Polytechnic. The former was started in 1969 and offers diploma and pre-university course in Business Studies, Technology and Arts and Science. The latter was also established in 1969 and specializes in the teaching of Electrical, Civil and Mechanical Engineering.

The oldest university in Malaysia is the University of Malaya, founded in 1962, which had its beginning in the establishment of the King Edward VII College of Medicine and Raffles College in Singapore in 1905 and 1929 respectively. The former was set up to produce 'assistant surgeons' to supplement the government medical service and general practitioners to improve the private medical sector. The latter was established as a tribute to Sir Stamford Raffles, the founder of Singapore, and had the two-fold aim of improving the educational facilities of the country and of laying the foundation for a university in the future.

This university was not established until 1949 after first the McLean Commission of 1939 and second the Carr-Saunders Commission of 1949 had deliberated and recommended the amalgamation of the Medical College and Raffles College into the University of Malaya to be situated in Singapore, with Arts, Science and Medicine as its first three faculties. It was to serve Singapore as well as the Federation of Malaya, now known as West Malaysia.

The demand for higher education in the two territories grew so rapidly that it soon became apparent that it would outstrip the available resources at Singapore. Accordingly the Aitken Commission of Enquiry was set up in 1957 to assess the situation and to examine the feasibility of establishing a separate and independent university at Kuala Lumpur in West Malaysia. This movement to have such a university was strengthened by the attainment of independence by West Malaysia in

1957.

As a first step in this direction a Division of the University of Malaya was established in 1959 in Kuala Lumpur. Like its counterpart in Singapore, it had a Principal, a Divisional Council and a Divisional Senate. The administration of the University of Malaya as a whole was run by the Vice-Chancellor and the Central Council. Initially subjects such as Medicine, including Pharmacy and Dentistry, and Law were taught only at the Singapore branch while Engineering studies were available only at Kuala Lumpur. Arts and Science subjects were offered at both places though Philosophy, Social Studies and Chinese Language and Literature were available only in Singapore and Malay and Indian Studies and Geography in Kuala Lumpur.

This arrangement, meant to be temporary, came to an end on 1 January 1962, when the University of Malaya situated in Kuala Lumpur and the University of Singapore were established as separate and autonomous institutions. Today the University of Malaya has about 8,000 students and offers degree courses in Agriculture, Arts, Dentistry, Economics and Administration, Engineering, Law, Medicine, Science and Chemical Technology. Diploma courses are also offered in Education, Animal Science and Public Administration and courses are run which lead to Certificates of Proficiency in languages (Malay, French, German, Russian, Dutch and Italian), Certificate in Education, Certificate in Photogrammetry and Certificate in X-Ray Analytical Methods. As noted earlier, the College of Agriculture will acquire the status of a university in 1973 so that starting from the academic session of 1973/74 there will be no intake of first-year students into the Faculty of Agriculture of the University of Malaya.

Apart from the University of Malaya and the Agricultural University there are two other universities in Malaysia. One is the University of Science of Malaysia, formerly the University of Penang, which was established in 1969 and which adopted the schools system instead of the conventional faculty and departmental system. At the moment the Schools of Biological Sciences, Chemical Sciences, Physics and Mathematics, Comparative Social Sciences, and Cultural and Community Studies as well as a Centre for Educational Sciences are functioning.

The fourth university in Malaysia is the National University, established in 1970 with Malay as the medium of instruction. At present it offers courses in Islamic Studies, Arts and Social Sciences, Economics and Commerce and Science.

From the above brief discussion it can be seen that higher education in Malaysia consists of two distinct groups. On the one hand, there are the universities where the minimum entrance requirement is the Higher School Certificate and, on the other, there are the technical colleges where a lower minimum entrance qualification, the Malaysian School Certificate, is required. With the general upgrading of educational qualifications in Malaysia the minimum requirement needed for entrance into the second group of institutions of higher education will undoubtedly be raised. In the discussion on the role of the university in development planning in Malaysia, the 'university' is defined to include both levels of higher education.

Role and Purpose of Higher Education

A distinction is usually made between education as a socially desirable public service or 'consumers' good' and education as an investment in human capital or 'producers' good' necessary for economic development. When the West Malaysian government decided in 1962 and the East Malaysian government in 1966 to provide free primary education they acted on the noble and generous principle that education is the fundamental right of all citizens and that it was socially desirable to extend education for its own sake as a 'consumers' good'. The same belief was evident in the decision by the West Malaysian Government in 1965 to extend the period of free education for a further three years to the end of the lower secondary level.

The same rationale should be ascribed to the provision of higher levels of education for it would be illogical to argue that the supply of the 'consumers' good' be terminated at the upper secondary, sixth-form or university level once it has been accepted that primary and lower secondary education is a socially desirable public good. However, the shortage of finance, the requirements of the labour market and the differences in the educational ability of the student population mean that the logical consequence of the basic assumption is never expressed in the actual provision of higher educational facilities. The educational structure of all countries is pyramidic, though the rate at which the pyramid tapers off varies between countries. In less developed countries there is a very broad base of primary education after which the pyramid tapers off very rapidly. For example, the percentages of the age-groups, 6-11 years, 12-14 years, 15-16 years, 17-18 years and 19-20 years enrolled in the primary, lower secondary, upper secondary, post-secondary and university level of education in Malaysia for the year 1967 are 91, 52, 16, 5 and 1 respectively. However, the pyramidic structure of education by itself does not destroy the argument that the provision of higher education in Malaysia, as in other countries, can be seen as the provision of a socially desirable public good.

In reality the higher educational system is rarely seen in this way. The majority of students see the universities and other institutions of higher learning as 'degree factories', places where they spend a tedious but necessary period of time working for that piece of paper that opens to them the world of well-paid employment. Reading outside the lecture notes for general education is rare and the concept of the university as a place where students can develop their critical facilities without fear of reprisal is lost as students often memorize their lecture notes for reproduction during examinations. The large size of lecture audiences and classes and the shortage of books help to encourage this negative attitude as lecturers are, consciously or unconsciously, forced to deliver their lectures at dictation speed. Another contributing factor is the training students receive in schools where 'the memorization and close reproduction of facts and details is exalted above the student's understanding, interpretation and application of knowledge learnt'.[83]

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[83] Wong and Gwee, *The Development of Education in Malaysia and Singapore*, *op. cit.*, p. 158.

It would appear therefore that higher education in Malaysia is seen by the students and their parents not as a 'consumers' good'. However, neither is it a 'producers' good' in the sense that it is investment in human capital which will lead to an increase in economic development. The Malaysian government cannot be said to have planned the expansion of higher educational facilities according to certain economic criteria in spite of pretensions to the contrary. Higher education is, as if by default, more a 'consumers' good' than a 'producers' good'. Out of this hazy difference between private and public attitudes has grown the comforting but mistaken belief by the society at large that the extension of higher education in the 'consumption' sense will automatically lead to an increase in investment in human capital in the 'production' sense and will therefore promote economic development.

Coordination of Higher Education Planning with National Economic Planning

It has been noted previously that three official studies on the Malaysian educational system have been undertaken and published so far. These are the Report of the Education Committee of 1956, the *Razak Report;* the Report of the Education Review Committee of 1960, the *Rahman Talib Report;* and the Report of the Higher Education Planning Committee of 1967, hereafter known as the *HEPC Report.* The first two reports were mainly concerned with primary and lower secondary education and with the issue of the use of Malay as a medium of instruction. The provision of higher education was discussed seriously only in the *HEPC Report* of 1967.

The *HEPC Report* was also the first attempt at educational planning in Malaysia as three different approaches of calculating the educational requirements were considered. The first was the manpower planning approach, basically a technological approach that assumes that the production function, from which the educational requirement is derived, does not allow for substitution of one factor for another when relative factor prices change. The second approach considered was the Harbison and Myers and the UNESCO indices of human resources development, which assumes that there are 'stages of educational growth', roughly comparable to the Rostowian stages of economic growth, through which all countries must pass as their per capita incomes grow. The third approach considered was what the *HEPC Report* called the 'formula approach' which is based on the Robbins principle that higher education should be made available to all those who are qualified by ability and attainment and who desire to pursue it.

The approach adopted by the *HEPC Report* was the 'formula approach' with the qualification that individual adjustments in various fields have to be made depending on the demand for various categories of personnel. The following targets for 1985 were set on the basis of this 'formula *cum* manpower' approach:

(i) 50 per cent. of those in the 15-16 age-group should receive upper secondary education as compared to the 13 per cent. in 1965.

(ii) 4 per cent. of the 17-18 age-group should receive sixth-form education as against the 1 per cent. in 1965.

(iii) 16 per cent. of the 17-18 age-group should receive college-level education as against the 3.5 per cent. in 1965.

(iv) 4 per cent. of the 19-22 age-group should receive university education as against the 0.7 per cent. in 1965.

The overriding principle behind these four targets is the need to conform, firstly, to the ratio of professional to sub-professional to skilled labour of 1:4:20 as recommended by the Manpower Survey of the States of Malaya, 1965,[84] and, secondly, to the ratio of 4:3:3 for Arts, Science and Technology as recommended in general by UNESCO and in particular for the UK by Robbins.

It would thus appear that the *HEPC Report* of 1967 has planned the expansion of higher educational facilities up to 1985 in accordance with the manpower requirements of the country systematically and according to tested economic criteria. However, a more careful examination of the *HEPC Report* reveals that it is a conceptually and statistically weak document.

It is conceptually weak because it accepts as the premise for its forecasts findings of studies that have really little relevance within the Malaysian context. Thus Robbins' recommendations are specifically for the UK, an industrially advanced country with educational problems that are different in kind to those encountered in Malaysia. The approach of Harbison and Myers to educational planning is suspect as there is some evidence to suggest that they were playing the 'game of maximizing R^2'.[85]

The *HEPC Report* is statistically unsatisfactory as it violated one of the cardinal rules of statistical analysis, the need to utilize all the available statistical data. The *Report* largely ignored the findings of the Manpower Survey of 1965, the only source of information available on the manpower requirements of the country. Its reason for ignoring the Survey contains some rather curious logic for it virtually implies that is is not possible to plan education expansion on the basis of meeting estimated future manpower requirements.[86]

The consequences of ignoring the findings of the Survey can be seen in Table IV.1 which compares the educational output implied by the *HEPC Report's* targets with the Manpower Survey projections of manpower requirements for 1965, 1970 and 1980. It can be seen that for all the three categories of manpower the educational output implied by the *HEPC Report* grows much more rapidly than the manpower requirements projected by the Manpower Survey of 1965. The result is a change from a shortage of manpower in each of the three categories in 1965 to a surplus by 1980. The available evidence thus suggests that the

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[84] Malaysia, Department of Statistics, *Manpower Survey, 1965: States of Malaya* (Technical Report), Kuala Lumpur, 1966.

[85] A.K. Sen, 'Economic Approaches to Education and Manpower Planning', *Indian Economic Review* (1966); excerpts reprinted in M. Blaug, ed., *Economics of Education, Vol. 2*, Harmondsworth, Penguin Books Ltd., 1969.

[86] Lee, *Educational Planning in West Malaysia, op. cit.*, p. 54.

Table IV.1

Comparison of Total Educational Output Implied by HEPC Report Targets with Manpower Survey Projections ('000)

	1965	*1970*	*1980*	*Average Annual Growth Rate (%)*
Professional Manpower:				
A. Manpower Survey	13.9	21.1	31.8	5.5
B. *HEPC Report*	11.9	17.5	40.1	8.0
Difference (B – A)	- 2.0	- 3.6	+8.3	
Sub-professional Manpower:				
A. Manpower Survey	75.2	108.2	157.2	4.7
B. *HEPC Report*	69.5	101.2	186.6	6.7
Difference (B – A)	- 5.7	- 7.0	+29.4	
Skilled Manpower:				
A. Manpower Survey	139.8	173.7	284.7	4.8
B. *HEPC Report*	137.3	274.6	680.2	10.8
Difference (B – A)	- 2.5	+100.9	+395.5	

Source: Ibid., p. 53.

targets of the *HEPC Report* may be somewhat optimistic as far as the gainful employment of the trained personnel is concerned. In any case it has been shown convincingly that neither the teacher supplies nor the financial resources implied by the targets of the *HEPC Report* are likely to be available.[87] The case for a better study of manpower requirements and the expansion of higher educational facilities is therefore clear.

Survey of University Resources Available for Development Planning Purposes

The university can contribute towards the formulation and implementation of development plans in three main areas: training, research and consultation. The part that it can play in training is perhaps the most obvious. It is certainly the part that is traditionally expected of the university. However, this is not to claim that universities have always taught the appropriate subjects or even that they necessarily know what the relevant subjects are.

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[87] *Ibid.*, Chapter 5.

If all that the formulation of a development plan requires is a knowledge of the latest mathematical or statistical planning techniques as taught in the leading universities of the West, then the choice of subjects to teach is a relatively simple one. The availability of staff at the university level is a problem but not an insurmountable one as local teachers can be trained overseas and foreign teachers can always be imported.

However, the setting of targets and the tests for consistency and efficiency, though important, are not the only criteria for effective development planning. There is a need also to know what model to use. This involves no less than a thorough examination of the objectives and assumptions of the model against the objectives and structural characteristics of the country concerned. For example, the use of an aggregate Harrod-Domar model in a country with no shortage of capital and a large foreign sector is obviously undesirable even though the mathematical and the statistical bases of the model itself are impeccable. The relevance of the Keynesian multiplier analysis in less developed countries may also be questioned as can the usefulness of the conventional Leontief input-output analysis. The answer to this important requirement is not, of course, the wholesale rejection of existing Western economic theory but rather the need to have a more discerning eye for what is relevant and realistic.

There is also a need to provide an education that enables the recipients to have a total view of the development process. In other words, apart from producing skilled and flexible technicians the university should also produce people who are aware of the sociological, psychological and political constraints to economic development and who can incorporate these factors into the framework of the plan. Development planning is often placed in the hands of the economic and statistical experts who, by their very training, tend to view problems encountered in the development process as purely economic or technological ones. This has often proved to be an unsatisfactory arrangement as development plans cannot be formulated and implemented within a political vacuum.

In a democratic society the decision-makers are the professional politicians who hold office on the sufferance of the electorate. In order to maximize and to maintain their electoral support these professional politicians become all things to all men with the unfortunate consequence that very often the formulation and the implementation of development projects cannot be conducted purely on economic criteria. This is not to argue that development planners should adopt an *ad hoc* approach but it does mean that technical competence should sometimes be constrained by political necessity. As Lewis, one of the wisest development economist of today, has commented, the secret of successful planning lies not in technical virtuosity but rather in sensible politics and good public administration. Technique is really subsidiary to policy.[88]

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[88] W. Arthur Lewis, *Development Planning: The Essentials of Economic Policy*, London, Allen and Unwin, 1966.

It is, of course, impossible to decide objectively where the delicate balance between technical competence and political necessity lies so that it is difficult to say what subjects the university should teach in order to cultivate this fine art. However, it is possible to say that a deep understanding of the political climate, an imaginative spirit and a historical perspective would help in the search for this constrained maximum and that such attributes cannot be cultivated by a narrow technical education.[89] Like the proverbial frog in the well which can only see a very small proportion of the sky, highly specialized personnel tend to have a very lopsided view of the development problem.

Once the choice of subjects has been decided the next problem is to devise suitable methods and formats of teaching them. Traditionally the university's teaching activities have been confined to degree-granting programmes. This is a rather restrictive arrangement which should be widened considerably to include teaching activities of an extension nature. For example, the acute shortage of skilled personnel in less developed countries has often resulted in people holding responsible positions for which they have not been specifically trained. The university can provide specialized training courses for these people. Even if people have been specifically trained for their jobs the rapid changes in technology soon render such knowledge obsolete. The university can provide continuous programmes to retrain and to upgrade such personnel, provided its own staff is keeping in touch with the latest development.

The second general area in which the university can play an important part is in the conduct of research on matters that are relevant and useful to the formulation and implementation of development plans. Apart from teaching, research is the other important function of the university. Traditionally the underlying principle behind university research is the pursuit of knowledge for knowledge's sake, without any intervention or constraint from the government. Hence there is some argument about the role that the university can play in research for development purposes for there could be a conflict in both the philosophy and the time-horizon between university and government research.

Certain information is classified and cannot be published even in professional journals. The university researcher may find this restriction unacceptable because of the traditional interpretation of research as an attempt to add to the world's body of knowledge which should be made available to all interested. He may also find it unacceptable because under the existing system in most universities promotion is based primarily on the strength of one's publications. Work for the government is rarely taken into account in promotional exercises.

There may also be a conflict in the time-horizon between university and government research. It is argued that as a rule academics take a longer time over their research programmes because their interpretation of research necessitates thoroughness in approach and vigour and complexity in techniques of analysis. The pressure to publish does not necessarily hasten the process because there is severe competition for space in professional journals and research papers have to be of a high quality before they are accepted for publication. On the other hand, government researchers are more concerned with the practical issues of running the government machinery and even when they are involved with more fundamental research, thoroughness in approach and vigour in analysis have often to be sacrificed for quick solutions.

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[89] Syed Adam Al-Ja'fri, 'Orientation of Arts and Science Education to Meet National and Regional Needs: a Note', in Yip Yat Hoong, ed., *Role of Universities in National Development Planning in Southeast Asia*, Singapore, RIHED, 1971.

These differences in the interpretation of research have often prevented the university and the government from greater cooperation in research activities. However, these differences though important are not altogether irreconcilable. First of all, academics have a choice in deciding whether they are interested in carrying out research on classified materials or not so there is really no question of having to compromise themselves. Moreover, there are a large number of areas in which research does not utilize classified information. For instance, it is difficult to conceive any problem over the publication of a piece of research on the degree of interdependence in the economy or on the extent and spread of effective protection in the country. As a rule research on technical problems is unlikely to raise any security problem and very often it is precisely in these areas that the government lacks expertise and wants greater cooperation from the university.

The conflict in the time-horizon is also more apparent than real. It is true that the government researcher works under a more severe time constraint than the academic but the pooling of resources would have the same effect as having a less severe time schedule. There need be no fear that the involvement of the university in government work would have adverse effects on the quality of teaching as university resources in most Southeast Asian countries are not stretched to that extent. At the same time better coordination and planning of research activities in government departments can do much to reduce the time constraints.

If the differences in the interpretation of research are reconcilable, then the explanation of the current practice in most less developed countries of contracting research work, which is necessary for the formulation of public development expenditure programmes, to foreign consultants must be found elsewhere. One possible explanation is that academics are not interested in participating in such activities. However, this argument is defensible neither on an empirical nor on *a priori* basis. University personnel have often voiced their interest in taking part in the development programme in a more active manner and there are no *a priori* reasons for expecting otherwise.

Another reason that has often been heard is that academics lack both the expertise and the experience for consultancy work. The argument that local academics do not possess the technical expertise might be true for certain specialized areas but it cannot be accepted as a general rule. For example, it cannot be taken seriously in the field of economic studies for even a cursory examination of the techniques used by most foreign consultants in economic feasibility studies will show that most of these are a pale shadow of what is available theoretically and conceptually. This is not to say that local economists are more competent in translating economic concepts into measurable variables but, given equal academic qualifications, local economists with their greater knowledge of the local situation would have a distinct advantage over foreign consultants.

The claim that local academics lack the necessary experience should not be accepted in its totality. Among those local academics who have research degrees, research experience, in the sense of being able to isolate and pursue a problem independently, is not lacking. In fact the discipline and perseverance involved in doctoral work may place the academic in a stronger research position than a foreign consultant without a similar qualification. What is perhaps meant when it is claimed that academics lack the experience is that universities do not possess the personnel who can manage and supervise large research programmes efficiently. This is a valid argument but is not enough to justify the predominance of foreign consultants in government research activities. First of all, such management and supervisory expertise can be hired, if at a high price, to direct teams of local personnel from the government and the universities in research work. Secondly, at a less ambitious level, the government can insist on the appointment of local counterparts before giving out a research contract. Surely it would be in the interest of the government and the country to have its own group of seasoned consultants, especially as the returns of 'learning on the job' are known to be very high.

It would appear that differences between the government and the university interpretations of research are not irreconcilable and that there are no serious political or economic obstacles to the greater participation of university personnel in the development programme in less developed countries. Perhaps the reason for the current lack of participation lies in the observation that 'no prophet is accepted within his own country'. The preference for imported goods, the English or American degree and generally things foreign bears compelling testimony to this general tendency.

The observations that have been made so far about the role of the university in research are equally applicable to its role as a consultant. There are no valid reasons for questioning the important part that the university can play in this area nor the efficiency with which most universities can fulfil this role. The observation of a preference for foreign products, whether human or physical, may have special significance in the field of consultation because of the need for frequent direct confrontation between the university as the expert and the government as the client.

The above are some of the problems that can be expected in general in attempts to increase university participation in the formulation and implementation of development plans. The exact nature of these problems depends, of course, on the country concerned. For instance, among the universities in Southeast Asia those in Thailand, Indonesia, the Khmer Republic, Vietnam and Laos are largely under the direct control of the government while those in Malaysia, Singapore and the Philippines conform more to the Anglo-Saxon concept of the university as an autonomous institution.[90] The problems faced by the first group of universities would obviously be different from those faced by the second group. There would also be major differences between the problems encountered among the universities in each group.

In an assessment of the ability of the universities in Malaysia to fulfil their teaching commitment properly three different questions have to be asked. The first concerns the existing academic staff to students ratio, the second the appropriateness or relevance of the subjects taught for development purposes and the third the ability of the teaching staff to change their courses if the contents of the courses presently taught are considered to be unsuitable.

By the standards observed in less developed countries the student to staff ratio in Malaysian universities (14:1) is favourable. Though there are weaknesses in using this ratio as an indicator of the effectiveness with which knowledge is being imparted to students, it does provide a fairly reliable guide. It can be expected, *ceteris paribus*, that the quality of teaching is lower the larger is the number of students per teacher. In cases where the number of students per teacher is very large lectures are often given at dictation speed so that students can get complete notes which are then learnt by heart to be reproduced in the examinations. Tutorials are a mockery, being no more than repetitions of lectures conducted for a smaller number of students and therefore a wasteful use of the time of both the students and the teachers.

Universities in Malaysia do not suffer from such extreme conditions of overcrowding so that compared with universities in most other less developed countries they have been able to achieve and maintain a higher standard of training and competence. However, whether they have been able to produce the right type of graduates for development purposes can only be determined by a detailed study of the techniques of teaching adopted and by an examination of the subjects taught. The former is outside the scope of this study and the only comment that can be made here is that the present emphasis on memorization should be discontinued.

As the development plans of Malaysia have as their ultimate aim the unity of the country it can be argued that the list of subjects that should be taught in order to bring this about would be very long. It would certainly include the subjects taught at the nine faculties of the University of Malaya, the oldest university in the country (Agriculture, Arts, Dentistry, Economics and Administration, Education, Engineering, Law, Medicine and Science). The formulation of the Second Malaysia Plan, with its emphasis on the New Economic Policy, would require not only the expertise of the social scientists to ensure the consistency of development targets and objectives with aspirations but also the help of engineers, agriculturalists, educationists, doctors, scientists and legal experts to draw up the initial programmes in their respective areas of expertise.

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[90] See Yip, *Role of Universities in National Development Planning in Southeast Asia, op. cit.*, pp. 3-4.

The distinction drawn earlier between education as a 'consumers' good' and as a 'producers' good' is helpful in assessing the relevance of subjects taught at Malaysian universities for development purposes. At one level the distinction is drawn between the different disciplines offered and at another between the topics taught within each discipline. As far as the first distinction is concerned Table IV.2 shows that in the University of Malaya, the emphasis has been on the teaching of Arts subjects over the period 1959-70. There was a decline in the share of Arts students in the total enrolment but by 1970 it still stood at 42.0 per cent., which was considerably greater than the share of the next most important faculties (Economics and Administration and Science at 17.5 per cent. each). If the Faculties of Economics and Administration and Education are classified as Arts-oriented, then the share of Arts students in the total enrolment increased from 50.5 per cent. in 1959 to 65.2 per cent. in 1970.

Table IV.2

University of Malaya Enrolment by Faculty
for Selected Years (%)

	1959	*1963*	*1966*	*1970*
Arts	50.5	52.3	50.1	42.0
Agricutlure	-	5.7	5.1	4.2
Economics and Administration	-	-	3.7	17.5
Education	-	2.0	5.3	5.7
Engineering	39.9	14.8	8.6	5.0
Medicine	-	2.3	7.7	8.1
Science	9.6	22.9	18.5	17.5
Total	100.0	100.0	100.0	100.0

Source: University of Malaya, *Annual Reports* for 1959, 1963, 1966 and 1970.

It would appear, from the available evidence, that the University of Malaya has placed too much emphasis on the teaching of Arts subjects. First of all, the implied ratio for Arts, Science and Technology graduates does not conform to the recommended one of 4:3:3 by UNESCO. Secondly, it has already been shown that the implementation of development plans in Malaysia has suffered from a lack of technical personnel.

These observations do not contradict the claim made earlier that more than technical expertise is needed to acquire a total view of the development process. Arts graduates are not the only people who have imagination, political acumen and a historical perspective. In any case, even if they are, by generally accepted standards the number of Arts graduates produced may have exceeded the number of such people demanded for the effective formulation and implementation of development plans in Malaysia. It is perhaps in recognition of this that the University of Science of Malaysia was established and that plans were formulated to upgrade and expand the Technical College and the College of Agriculture.

The distinction between education as a consumption or an investment item can also be made between subjects within the same discipline but it will not be as clear. For example, it can be argued that within the discipline of Economics, such courses as Economic Development or Planning would be more relevant for development planning purposes than courses such as Microeconomics or the History of Economic Thought. However, the distinction is, of course, less marked than that between disciplines such as Classics and Economics or Malay Studies and Engineering.

In this study only an assessment of the relevance of courses taught within the disciplines of Economics in Malaysian universities is given. In the Faculty of Economics and Administration at the University of Malaya there are seven divisions: Accounting, Public Administration, Statistics, Business Administration, Applied Economics, Analytical Economics and Rural Development. Only the last three divisions can be said to produce graduates in the disciplines of Economics though the Faculty grants the Bachelor of Economics degree to all its graduates and the courses Economic Principles, Malaysian Economics and Economic Development of Southeast Asia are compulsory to students in all the seven divisions.

The course structure of the three divisions in Economics consists of three distinct groups. First, there are the faculty courses mentioned earlier (Economic Principles I and II for the second and third years, Malaysian Economics for the second year and Economic Development of Southeast Asia for the third year). Second, there are the compulsory divisional courses which are not completely airtight as Economic Analysis and Applied Statistics are taken by students from all three Divisions. Third, there are the optional courses which are offered on an inter-divisional basis right across the Faculty.

The general impression obtained after a detailed examination of the course offerings is that the division is an arbitrary one. There are really no satisfactory *a priori* reasons and there is a significant degree of similarity in the compulsory courses taken by students in the three divisions. A corollary of this observation is that there is a premature attempt to have development-oriented courses before students are fully equipped with the rudiments of economics.

There is really no distinction between the terms, Analytical Economics and Applied Economics, for the latter term, as it stands, means the application of economic theory in a study of a problem and this must, by implication, therefore be analytical. Applied Economics must be distinct from Institutional or Descriptive Economics. It is difficult to visualize a situation where an applied economist can study an economic problem properly without having a thorough grounding in economic theory. The study would most probably end up being descriptive.

The distinction between the Applied Economics Division and the Rural Development Division is also largely arbitrary. The latter is merely a part of the former and the observations made in the previous paragraph are therefore equally valid. The study of rural development, unless conducted within a theoretical framework, becomes no more than a descriptive account of the institutions and problems of the rural sector.

It is perhaps in recognition of this fear that the Applied Economics and the Rural Development Divisions have both imposed Economic Analysis as a compulsory subject on top of Economic Principles I in the second year. In the third year students from the Applied Economics Division have to take Macro-Economics on top of Economic Principles II. The latter is the only course on economic theory taken by students in the Rural Development Division in the third year.

The amount of theory incorporated in these courses provides an inadequate background to the specialized courses taken in conjunction by students in these two divisions. Economic Principles I and II cover Micro and Macro-Economics at a very elementary level as the interests of students from the Faculty of Arts, who are majoring in Economics but with an inferior Economics background, have to be accommodated. Economic Analysis is pitched at a higher level but is still inadequate in providing the necessary background.

Apart from the lack of a sound theoretical background students from the Applied Economics and Rural Development Divisions also lack mathematical and statistical expertise as the only course they have to take is Applied Statistics in the second year. A consequence of this can be seen in the case of Applied Economics students taking Planning, a compulsory divisional paper. In discussions on solutions to input-out matrices the exposition is reduced to the approximation procedure because students have no knowledge of matrix algebra. Another example concerns the role of price policy in agriculture development. An understanding of this crucial area requires a detailed study of supply responses which will then require a knowledge of differential calculas and multiple regression analysis. These mathematical and statistical techniques are largely outside the province of students from the Rural Development Division.

A more appropriate syllabus would be to make Micro-Economics, Macro-Economics, Statistics and Mathematics compulsory for students from all the three divisions and to extend these courses over the second and the third years. The other courses would be made up of options to reflect the interests of the students. The rationale is that optional courses such as Economic Development, Planning or Agricultural Marketing would be more effectively taught and better understood if the students have the basic economic, mathematical and statistical background. It is in this sense that development-oriented subjects such as Planning are now being taught prematurely.

An examination of the course offerings in Economics at the National University and the University of Science shows that more or less the same problems exist. In fact the situation is more serious in the University of Science for it is committed with its School of Studies approach to a more liberal education in principle. The danger of offering half-baked courses in Economics and other disciplines in the social sciences under the plea for an inter-disciplinary approach is therefore all the greater.

The general observations made earlier about the possibility, willingness and the technical expertise of academics in conducting research for governments are relevant to the Malaysian situation. The observation that a lack of experience need not be an insurmountable obstacle has also relevance to the problem in Malaysia. The question that should therefore be asked in the survey of university resources available for research and consultation for development planning purposes concerns the availability of time. In this respect there can be little doubt that university personnel in Malaysia do have the time. In the University of Malaya the average teaching load is ten hours a week which consists of two one-hour lectures and eight one-hour tutorials. Even if the time taken for preparing the two lectures and marking the tutorial essays is taken into account, it would be difficult to argue that this would leave the academics no time to undertake research and consultation. The Deans and the Heads of Departments or Divisions would have additional duties to perform but academics who hold such posts are basically elected and have therefore a choice between administrative work with its financial or social returns or research and consultation work. Time is also not a constraint for academics in the other two universities in Malaysia in terms of conducting research and consultation work for the government.

Extent of Current University Involvement in Development Planning in Malaysia

In view of all that has been said about the ability and the availability of academics to conduct research and to act as consultants for development planning purposes it might be expected that their involvement is very great. Unfortunately, however, this is not the case.

There is no institutional arrangement, by and large, for cooperation between the universities and the government on research and consultation. Whatever links there are have been created on an *ad hoc* basis and these are on a very small scale. Thus in the field of research the number of projects that the universities are involved in is very small indeed. In the University of Malaya the Faculty of Engineering is undertaking some research for the Klang Valley Development Project but only three of its members are involved. No other faculty has been called upon to take part in this project which also involves research in disciplines in which the University of Malaya has expertise. For instance, the Faculty of Economics and Administration and the Faculty of Law could make some contribution in the fields of social sciences and legal studies.

The Faculty of Economics and Administration has just started work on forecasting traffic flows for the Ministry of Transport and Communications. About six of its members are involved. A member of the staff is engaged in research for the Ministry of National Unity but this is done on a personal basis and not through the Faculty. Another area in which the Faculty of Economics and Administration can be said to be involved in research work for the government is through its post-graduate programme. A number of Master of Economics candidates is doing research on topics suggested by the Economic Planning Unit of the Prime Minister's Department. The students are given access to the files and other relevant information and arrangements are being made to provide them with external supervisors if required. This is a useful arrangement as all the parties concerned will benefit. The government will obtain a thorough and objective analysis of pressing problems at minimal costs. The students will no longer have to spend a lot of time searching and then asking for the permission to use the relevant information. More time can be spent on analysis so that, *ceteris paribus*, better theses will be submitted. The university will benefit also to the extent that the standard of its research work is improved.

Of all the faculties in the University of Malaya, perhaps the Faculty of Education has the best relationship with the government. The Dean of the Faculty is a permanent member of the Central Curriculum Committee of the Ministry of Education. At the same time members of the Faculty and of the Educational Planning and Research Division of the Ministry of Education are involved in joint-research projects.

If cooperation between the universities and the government is small in the field of research, then it is negligible in the field of consultation. The permanent membership of the Dean of the Faculty of Education of the University of Malaya in an important government committee is the only example of this type of consultation. No other Dean, still less a member of staff, has been called upon through such an institutionalized arrangement to advise the government in his respective area of specialization.

It is therefore somewhat ironical that there have been some cases of academics being seconded to head statutory bodies for this is a more advanced form of consultation. The Malaysian Agricultural Research and Development Institute (MARDI), established in 1969 to carry out research on the production practices and marketing opportunities of agricultural commodities, is headed by a member of the Faculty of Agriculture. The National Institute for Scientific and Industrial Research (NISIR), established in 1971 to promote, coordinate and undertake scientific and industrial research, has as its director a member of the Department of Physics of the Faculty of Science of the University of Malaya.

These activities are, in sum, the extent of current university involvement in research and consultation for development planning purposes in Malaysia. They are a very poor indicator of the role that an academic community of over 500 can play in the formulation and implementation of development plans in the country.

Types of Contribution Universities Could Make Towards Development Planning in Malaysia

The areas in which the university can play a part in the formulation and implementation of development plans have been discussed earlier in general terms. These are training, research and consultation. The purpose of this section is to discuss the specific areas in research and consultation that universities in Malaysia can contribute. This amounts to no less than a statement of what the author feels to be the most important areas of research for development planning in the country. The role that the universities can plan in the field of teaching is left out as it has already been dealt with in some detail earlier. For obvious reasons the discussion is limited to research and consultation within the discipline of Economics.

The first order of priority is to fill in the many statistical gaps for the construction of economic models, for even the analysis of simple economic relationships would be a waste of time if the statistical data were not reliable. It was pointed out in Section III that efforts should be concentrated on the collection of data on the capital stock of the country and its rate of depreciation by sector. This would enable a more efficient use of the Harrod-Domar model of planning. Another area is national accounts statistics so that time-series analysis such as structural changes in the industrial origin of the GDP can be carried out meaningfully. A third area is the construction of an input-output table along the lines suggested by Seers. This is to enable the study of the extent of inter-dependence in an economy that has a large foreign sector, an increasingly important government sector and a manufacturing industry that is small and narrowly based.[91]

In terms of economic research there are a number of areas that should be given priority. One is an analysis of the mechanics of moving from an import-substituting to an export-oriented industrialization programme. Within this broad area are questions connected with the degree and spread of effective as opposed to nominal protection, the extent of excess capacity in manufacturing activities and its utilization for export and employment creation, and the identification of export-oriented industries.

Another is the choice of technique, important because of the need for the creation of greater employment opportunities and the need to identify the base for export-oriented industries. Research is urgently needed to find out the degree to which factors of production can be substituted for one another without adverse effects on the quality of the goods produced. For those industries where substitution is possible the choice between a labour-intensive or a capital-intensive technique of production will depend on the time-horizon of the government. The choice may be between having greater employment opportunities now or having greater employment opportunities in the future.[92] There is also a need to test the Heckscher-Ohlin hypothesis within the Malaysian context. This hypothesis states that a country's comparative advantage lies in the production of those goods which utilize relatively more of the factors of production that it is liberally endowed with. A country that lacks capital but possesses abundant labour would therefore have a comparative advantage in the world market by producing labour-intensive goods. If this hypothesis holds for Malaysia and her trading partners then it could be used as the basis for the export-oriented industrialization programme in Malaysia.[93]

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[91] See Section III.

[92] See Section II.

Another area in which the universities can participate is research in agricultural development. Felda's method of land development should be assessed. In particular the effectiveness and viability of the present practice of smallholding cultivation with eventual ownership should be analyzed and alternative methods examined. It might also be useful to conduct a social cost-benefit analysis along the lines suggested by Little and Mirrlees.[94] Another topic in agricultural economics that deserves immediate attention is the role of price policy in agricultural development. In line with a lot of other countries Malaysia is pursuing a positive as opposed to a negative price policy in agriculture. Experience in country after country has shown that the negative policy of taxing the farming community to subsidize the industrial sector was working against the long-run interests of the country. As a result the negative approach was abandoned in favour of a policy of encouragement. In order to formulate such a policy effectively quantitative knowledge of the farmers' response to economic incentive is needed.[95] Research in the area of supply response is still in its infancy in Malaysia.

Then there is the important area of income distribution. Planners in Malaysia are in the peculiar position of having to make statements on this topic which are generally accepted to be true but which cannot be substantiated by empirical data. There is little doubt that effective policy concerning this important issue can be formulated only from a strong statistical basis and that irresponsible interpretations of it can be given easily because of the absence of such a basis.

Lastly, research should be conducted on the possibility of conflict between different objectives at a point in time and also on the question of intertemporal choice. This is an important area of research for Malaysia in view of the particular mix of economic, social and political factors that exists in this country.[96]

The above are only some of what the author feels to be the most important areas of research for development planning in Malaysia. There are also those that the author feels the universities have both the interests and the expertise to take part in. These projects could be carried out either as projects contracted out to university personnel or on a joint-basis. Another possibility is for university personnel to act in an advisory capacity.

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[93] David Lim, 'Export-Oriented Industrialization: a Case Study of Malaysia', *Kajian Ekonomi Malaysia* (December 1970).

[94] I.M.D. Little and J.A. Mirrlees, *Manual of Industrial Project Analysis in Developing Countries: Volume II: Social Cost Benefit Analysis*, Paris, OECD, 1968; I.M.D. Little and D.G. Tipping, *A Social Cost Benefit Analysis of the Kulai Oil Palm Estate*, Paris, OECD, 1972.

[95] David Lim, *Supply Response of Primary Producers*, Kuala Lumpur, University of Malaya Press (forthcoming).

[96] See Sections I and II.

Problems Preventing a Closer Cooperation Between the Universities and the Government in Malaysia

The impression obtained after talking to government officials concerned with development planning is that they welcome university participation in their work. There is no longer any belief that what is local is necessarily inferior to foreign products. There is also a realization that the government is under-staffed in research departments and that the universities possess expertise which has hardly been utilized for this purpose. However, the fact remains that the current university involvement in development planning is very small.

A number of factors that may have prevented a closer cooperation between the universities and the government in Malaysia can be identified. The first is the possibility that there is a marked difference between the views of government officials and those of the politicians in power. Among other things, the politicians in power may believe that classified information may leak out to opposition parties which would then ask difficult questions in Parliament. However, this difficulty is more apparent than real as a great deal of research is on technical matters and does not require the use of sensitive information. Moreover, academics can be bonded legally on this matter.

The second possible explanation is that the academics have no monetary incentives, for the salary structure in Malaysia is such that academics can live comfortably on their salaries. Thus while professing to have an interest in participating in the development programme of the country in a more active way they are under no financial pressure to give the idea more than lip-service. The situation is very different in Thailand, Indonesia or the Philippines where salaries are so low that academics have to take on other jobs in order to acquire and maintain an acceptable standard of living. Conducting research and acting as consultants for the government would present an attractive way of augmenting the salary. In those cases where the research interests of the government are matched by those of the academics it would be an ideal arrangement.

The most important obstacle preventing a closer cooperation between the universities and the government in Malaysia is the lack of understanding of the motivations and the strengths and weaknesses of one another. This has often resulted in suspicions and ill-will that soon turned small and reconcilable differences into differences of substance and kind. Take, for example, the case of the Klang Valley Development Project. This is a multi-million dollar project to produce a master-plan of development for the entire Klang Valley. The expertise required to conduct such a survey extends from engineering to all disciplines within the social sciences, including even expertise in legal matters. The government, in its enthusiasm to respond to the universities' call for greater involvement in the development planning programme, offered the entire project to the University of Malaya. After some consideration the University of Malaya turned down the offer because it rightly felt that it did not possess the managerial and supervisory skill required for such a large project. It was not simply a question of the University having expertise in most of the disciplines concerned. There was also a need for people who could coordinate the many projects that would have to be carried out simultaneously for such a programme and ensure that they were on schedule. The University clearly did not possess such expertise.

It would have been unfair of the government to expect otherwise for the University of Malaya is not a large consultancy firm. A more reasonable approach would have been to employ foreign consultancy firms to be in overall charge of the project and to have local counterparts for those areas of the project in which the University of Malaya has expertise. As it turned out, a foreign firm was awarded the contract and only three academics out of a university staff of 500 were invited by it to take part in the programme. The government, through a lack of understanding of the strengths and weaknesses of the University, has lost not only the knowledge that local academics have of Malaysian conditions but also another good opportunity of providing local academics with some experience of consultancy work. At the same time the academics were left with the impression that the government really had no intention of asking for their participation. They felt that the government knew that the University could not take on the task and that the refusal would be used against future university requests for involvement with development planning projects.

Academics also have only a vague idea of the working of the government machinery. They should appreciate the fact that a large degree of inertia has been built into the system so that changes within it can only be brought about slowly. Their role should therefore not be to wait passively for government officials to make the move but to seek actively for involvement in the research programme. One way of doing this is to talk informally with senior economic planners and discover what they consider to be the most important areas of research. Academics should then get together and draw up detailed research proposals on those topics on the list in which they have an interest. These proposals should then be given to the government for consideration as projects to be submitted for the coming fiscal years. Wherever possible these proposals should include government research workers so that the more junior ones would benefit from the programme while the more senior ones could pass on their experience and expertise to the academics. These steps should help to facilitate attempts to encourage greater university involvement with government research activities.

Recommendations for Alleviating Obstacles to a Closer Relationship Between the Universities and the Government in Malaysia.

The recommendations given here fall very conveniently into three categories. The first concerns action that can be taken by international organizations to publicise the fact that the differences in the interpretation of research by universities and governments are not irreconcilable. For example, in late 1971 RIHED organized a workshop on the 'Role of Universities in National Development Planning in Southeast Asia' in Singapore, which was attended by leading academics and senior government officials.[97] The stands taken in the papers presented indicated that the two groups had misconceptions about the motivations and styles of working of each other. However, the discussions that followed showed that both groups had come to agree that they could benefit from each other in joint research projects and from greater cooperation in general. The impression obtained from reading the proceedings of the workshop is that certain stereotypes that the academics and government officials present had of one another had been broken down. There should be more conferences of this nature so that the conclusion that neither the university nor the government need to compromise itself in a real sense permeates through the entire strata of the university and government machinery. In this respect RIHED is doing an admirable job.

The second group of recommendations concerns action that can be taken by the Malaysian government. An area in which immediate action can be taken is the stipulation before a contract is given out to foreign consultants that local counterparts, taken from the universities, be included. The idea of having local counterparts is not new as government officials have already been assigned to such posts. What would be novel would be the recruitment of such local counterparts from the universities.

As well as this the government should identify certain areas of research where technical expertise is required and then invite qualified academics to carry out the research either on their own or on a joint basis with government research workers. The emphasis should be on technical topics as this is the area where the government is short-handed and the universities best equipped. Research on sensitive issues and policy matters should be discouraged in the initial stages of cooperation as should large and ambitious projects.

Another area in which the government should take quick action is to include some academics on important development committees. The idea is, first, to have the objective comments of the academics and, second, to keep in touch with recent developments in the literature. It is always a good idea to have the views of a third party and especially a party that is in tune with the latest developments in the field. Academics have both the time and the interest to read articles in the latest professional journals or to read the latest books published so that they are an excellent source of information on current developments in their respective areas of specialization. This need for a continuing dialogue between academics and government researchers is important in view of the speed with which ideas, theories and techniques are changing in all scientific fields. An advanced form of consultation by academics is for some of them to be seconded to head research institutes or departments. This should also be encouraged.

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[97] Yip, *Role of Universities in National Development Planning in Southeast Asia, op. cit.*

The last group of recommendations concerns steps that can be taken by the universities. University authorities, especially those at the University of Malaya, should introduce attractive staff training programmes so that young and junior academics can acquire further training and research experience more easily. There should also be greater recognition of work carried out by academics for the government by the university authorities for promotional purposes. This is expecially so for work that cannot be published even in professional or scholarly journals.

Academics should not expect the government to make the initial official move all the time. As suggested previously the process of getting greater university involvement in government research activities can be facilitated by academics submitting detailed research proposals to the government after informal discussion with senior government officials. There is a large degree of inertia in any bureaucratic machinery and the academics must do what they can to lessen it.

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Part 3

SOUTH VIETNAM

NGUYEN TRUONG

INTRODUCTION

The two Vietnams – The Republic of Vietnam in the South and the Democratic Republic of Vietnam in the North – emerged as a result of the 1954 Geneva Agreements which simultaneously put an end to the French colonial era in Indochina. An uncertain peace then followed the eight-year long first Indochina War. The Vietnamese won their independence, but unfortunately their nation was divided into two at the 17th parallel as a result. The seed was thus sown for the second Indochina War which broke out six years later in South Vietnam with the establishment of the National Liberation Front in 1960. Since then, decisive changes have taken place in the balance of powers on the political scene of the world, and particularly of Southeast Asia. At the time this paper was written, efforts to end the war were earnestly deployed in all the capitals directly or indirectly involved. Should an end to the war come soon, the question will be how far have the Vietnamese been prepared for peace. New problems will certainly arise which need to be solved immediately. This is no easy task. The Vietnamese would have to care for the wounded and disabled, the war widows and orphans, the war veterans and demobilized soldiers, the freed political prisoners and prisoners of war, and above all, to speed up the process of national reconstruction and development.

To cope with these urgent problems, outside help would be sought, especially from those super-powers who have a moral responsibility towards Vietnam. The main task, however, must rest with the people and governments of Vietnam. The present study proposes to review the evolution of national development planning in the Republic of Vietnam and to identify the main problems. It also proposes to seek ways to make universities instrumental in the formulation and implementation of development plans as the universities remain at any time and in every country the greatest force in shaping the life of the nation; and there is always a positive correlation between the quality of the universities on the one hand and the progress of a nation on the other.

SECTION I

HISTORICAL BACKGROUND

Social and Economic Development in Recent Years

The Republic of Vietnam awoke to a consciousness of its underdevelopment at its very inception. Historical obstacles to economic development – such as the lack of capital, dearth of skilled labour and technicians, archaic social structures, anti-economic psychology of the masses – far from disappearing with the country's attainment of political independence, tended instead to be strengthened by the population growth and the wave of over 800,000 refugees coming down from the North.

To meet this challenge, the government of South Vietnam, right at the outset, took vigorous actions in the political and administrative as well as social and economic fields. Efforts were made to set up an effective administration from the centre down to the level of the villages and hamlets to bring security to the rural area and to ensure law and order all over the national territory. At the same time the government diverted a substantial portion of the time and energies of its best people to the social and economic front. Various measures were taken to cope with urgent economic adjustments, to lay the foundation for a sound and diversified economy, and to create physical, institutional, as well as social infrastructures necessary for long-term development. Thus, a land development programme was successfully implemented to resettle over 800,000 refugees; the amount of imported goods was maintained and agricultural production increased to ensure a decent standard of living and monetary stability; a central bank, namely the National Bank of Vietnam (1955), and other monetary authorities like the Commercial Credit Bank (1955), the National Agricultural Credit Office (1957), and the Industrial Development Centre (1957) were created; land reform was launched in 1956; the highway network and the railway system were restored and expanded; and education, public health, and public utilities were expanded and improved on. As a result, gross domestic product at market prices increased from 64,264 million piastres in 1955 to 82,633 million in 1960, with an average annual growth rate of almost 5 per cent. The primary sector had an encouraging performance, bringing its production from 15,700 million piastres in 1955 to 25,144 million in 1960, thus yielding an average growth rate of 10 per cent. per annum. Industries also made progress, though at a more modest rate, producing a value of 9,385 million piastres in 1960 as compared with 8,165 million in 1955. It is perhaps of equal importance to note that national budgets did not register a deficit while prices remained relatively stable during the whole period.

Unfortunately hardly had the people begun to savour the pleasures of peace than the noise of the gun was heard again with an increasingly intense tone. From the beginning of the 1960's, the nation was again plunged into another protracted and more destructive war. Since then, economic considerations have given way to military objectives, and all governmental programmes have been geared mainly towards ensuring stability and checking inflation at the expense of economic development. The economy, therefore, slumped almost into a state of stagnation, with a GNP at 1960 constant market prices of 117 billion in 1970 as compared to 82 billion in 1961, yielding only an average growth rate of 3.5 per cent. per annum, while the population increased at an average annual rate of 3 per cent. for the same period. It is, moreover, worth noting that the most important part of the increase in GNP took place during the first five years of the decade, and that since 1966 the annual growth has dropped to an average of 1.5 per cent., i.e. well below the rate of population growth (see Table I.1). The national budget began to show an increasing deficit from one billion piastres in 1961 to 66 billion by the end of 1971 (see Table I.2). Money supply has also expanded rapidly, from 22,295 million piastres in 1963 to 232,255 million by the end of June 1972, i.e. an increase of 209,960 million piastres or over ten times (see Table I.3). Consequently, prices have soared with an average increase of 30 per cent. per annum. The structure of the economy was seriously distorted, and the country became increasingly dependent on foreign assistance, and particularly on American concessionary aid (see Table I.4).

History of Development Planning

As the signs for peace in Vietnam become clearer, economic problems in South Vietnam are gradually regaining their priority. Lately, steps have been taken to adjust the US import-based war economy to the eventual withdrawal of American forces and imports. To prepare for the necessary import restraints and cuts and to prepare an operational plan based on present resources to strengthen the economy towards achieving national unit, economic and social development have become programmes of high priority. To achieve these objectives requires sound planning and implementation.

In fact, planning is not new in South Vietnam although the weakness of its government as a planning, coordinating, and implementing agent for economic policies has reduced its effectiveness. Since its independence in 1954, successive governments in South Vietnam have fully recognized the importance of planning as a means of advancing and accelerating economic growth. Efforts have been made in economic planning. A central planning agency, namely, the Directorate-General of Planning, was created as early as 1955 and placed under the direct supervision of the Presidency. Since 1971 it has been attached to the Ministry of National Development and Planning. Its task is to carry out national development planning and to coordinate and follow up the implementation of projects and plans approved by the government. With the help of various ministries and related government agencies, the Directorate-General of Planning was responsible for establishing the First Five-Year Plan, 1957-61, the Second Five-Year Plan, 1962-6, and the current Four-Year Plan, 1972-5.

Apart from these plans, there have been other significant planning efforts which are worth mentioning here, namely:

(i) *The Postwar Development of the Republic of Vietnam: Policies and Programmes*, submitted by the Joint Development Group to the governments of

Table I.1

GNP for the Period 1961-1970 at 1960 Constant Market Prices
(In million piastres)

Items	*1961*[a]	*1962*[a]	*1963*[a]	*1964*[a]	*1965*[a]	*1966*[a]	*1967*[a]	*1968*[a]	*1969*[b]	*1970*[b]
Private consumption expenditure	66,147	71,494	72,389	76,431	78,272	77,900	86,929	77,250	82,376	77,023
General government expenditure	14,752	18,505	19,013	21,623	24,914	33,924	37,439	42,454	47,876	53,937
Gross domestic fixed capital formation	7,340	8,761	7,283	11,225	13,430	19,487	20,947	14,271	17,180	13,475
Exports	5,679	5,885	8,275	7,348	9,900	14,613	15,317	6,991	8,324	7,408
Less imports	-11,503	-14,783	-16,559	-17,127	-20,443	-45,514	-56,759	-44,687	-49,930	-37,855
Net factor income payments to the rest of the world	-731	-537	-411	-436	1,893	8,077	6,750	8,804	5,319	3,418
GNP	81,695	89,326	89,990	99,064	107,966	108,487	110,673	105,083	111,146	117,406

Sources: Banque Nationale du Vietnam, *Revenu National du Vietnam,* Avril 1971, p. 8.
National Institute of Statistics, *Vietnam Statistical Yearbook,* 1971, p. 139.

[a] Revised figures.

[b] Preliminary figures

Table I.2

National Budget Summary, Fiscal-Year 1965 to Calendar-Year 1971[a]
(In million piastres)

	1965[b]	*1966*[b]	*1967*[b]	*1968*[b]	*1969*[b]	*1970*[b]	*1971*[c]
Revenues	16,442	28,036	45,712	51,607	62,766	120,513	169,000
Expenditures	47,780	64,010	86,190	110,840	138,049	192,239	235,000
Military expenditures	28,513	38,520	52,820	71,875	91,591	123,996	130,000
Other expenditures	19,267	25,490	33,370	38,965	46,458	68,243	105,000
Deficit beofre foreign aid	-31,338	-35,974	-40,478	-59,233	-75,283	-71,726	66,000
Foreign aid	9,984	19,777	23,029	21,714	14,745	29,475	30,000
Deficit after foreign aid	-21,354	-16,197	-17,449	-37,519	-60,538	-42,251	-36,000

Source: Vietnam Statistical Yearbook, 1971, op. cit., pp. 144, 145, 153, 155.

[a] Before 1970, the fiscal year correspond to the calendar year and an additional five-month complementary period (January through May) of the following year. Since 1970, the budget is executed on a calendar year basis; all disbursements and receipts must be carried out in this period and the remainder of the budget is deferred to the following calendar year.

[b] Actual revenues and expenditures.

[c] Budgeted revenues and expenditures.

Table I.3

Money Supply at End of Period from 1963 to June 1972
(In million piastres)

	1963	*1964*	*1965*	*1966*	*1967*	*1968*	*1969*	*1970*	*1971*	*June 1972*
Notes in circulation	15,543	19,003	32,841	46,026	61,258	91,796	108,107	125,916	162,123	191,370
Demand deposits	6,752	8,423	14,755	17,430	20,946	32,272	32,633	36,957	46,276	40,885
Money supply	22,295	27,426	47,596	63,456	82,204	124,068	140,740	162,873	208,399	232,255

Sources: *Vietnam Statistical Yearbook, 1971, op. cit.*, p. 178 for 1963-9.
National Bank of Vietnam *Annual Report*, Fiscal Year 1971, for 1971.
Banque Nationale du Vietnam, *Bulletin Economique*, No. 07-08, p. 47 for June 1972.

Table I.4

US Economic and Military Aid
(in Million US$)

	1961	*1962*	*1963*	*1964*	*1965*	*1966*	*1967*	*1968*	*1969*	*1970*
Economic aid	146.6	146.0	188.6	220.5	273.2	745.1	656.8	558.1	430.7	614.4
Military aid	65.0	144.0	185.6	182.5	269.0	861.0	1,203.5	1,054.5	1,892.4	1,578
Total	211.6	290.0	374.2	403.0	542.2	1,606.1	1,860.3	1,612.6	2,323.1	2,192.4
US miliatry transaction payments	12.0	37.0	52.0	64.0	188.0	408.0	564.0	558.0	476.0	408.0

Sources: Aid figures are from statements by US Secretary of Defence Laird in *Briefing on Vietnam, Hearings, Senate Committee on Foreign Relations,* 8 and 19 November 1969, as quoted by Emile Benoit in 'Impacts of the End of Vietnam Hostilities and the Reduction of British Military Presence in Malaysia and Singapore', *Southeast Asia's Economy in the 1970's,* Manila, Asian Development Bank, 1970, p. 699.

Figures on US defence expenditure for goods and services in Vietnam are from Cora Shepler and Leonard G. Campbell, 'US Defense Expenditures Abroad', *Survey of Current Business,* December 1969, as quoted by Emile Benoit, *op. cit.,* p. 699.

South Vietnam and the United States in March 1969. This group, set up in February 1967 and supported by both governments, was dissolved in early 1970. It did not, however, propose to 'prepare detailed operational plans, but to examine the problems and opportunities likely to confront Vietnam when the war ends, and to suggest policies and strategies for development on which operational plans could be constructed, and the restoration of the economy could proceed with a view to the achievement of economic independence in as short a space of time as possible'.[1]

(ii) *The Programme for Social and Economic Development, 1970-1, prepared* by the Office of the Special Assistant to the President in charge of National Planning in cooperation with the Directorate-General of Planning and other government ministries.

(iii) *The Five-Year Rural Economic Development Plan, 1971-5*, prepared by the Ministry of Land Reform, Agriculture and Fishery Development and officially promulgated by the government in March 1971.

(iv) *The Four-Year Infrastructures Development Plan, 1972-5*, formulated by the Ministry of Public Works in early 1972.

(v) *The Four-Year Community Self-Defense and Local Community Development Plan, 1972-5*, prepared by the Central Pacification and Development Coordination Centre in early 1972.

These various documents were recently used as a basis for the preparation of the current *Four-Year National Economic Development Plan, 1972-5.*[2]

Nature and Scope of Development Planning

Economic planning was thus introduced into South Vietnam not long after the achievement of its political independence in 1954. The First Five-Year Plan was adopted as early as 1957. It was supposed to be implemented but neither the Plan nor its results were ever published. This Plan could not be compared with development plans in other countries because it had no statistics pertaining to population growth, economically-active population, national accounts, capital formation, etc. In a word, the basic data essential for comprehensive planning were not found in it. It contained just a number of development programmes. Thus the Plan was merely a guideline for various government departments.

The Second Five-Year Plan, 1962-6, was unfortunately ill-fated. Increasing insecurity and unfavourable political events which led to the overthrow of the late President Ngo-dinh-Diem in late 1963 forced it to be suspended shortly after its promulgation. The Plan itself envisaged that the country would have to devote most of its available resources to cope with the war, and that during its first two years, economic and social development would have to be geared to increasing the war effort. Only after this had been achieved could economic problems be expected to regain their proper priority. For all these reasons, the Second Five-Year Plan was confined to drawing up a list of programmes and projects whose implementation though intended was not certain during the period of the Plan.[3]

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[1] *The Postwar Development of the Republic of Vietnam: Policies and Programmes, Summary*, New York, Joint Development Group, March 1969, p. 1.

[2] Nguyen van Hanh, *Briefing on the Four-Year National Economic Development Plan, 1972-5*, Directorate-General of Planning, Republic of Vietnam, 1972, pp. 16-17.

As mentioned earlier, economic planning was completely disrupted by political and military disturbances for several years since the suspension of the implementation of the Second Five-Year Plan in 1963. However, since the emergence of the Joint Development Group in early 1967, the government's concern for social and economic development has been growing. Sporadic efforts have been made in various sectors of the national economy before an overall plan, namely, the Four-Year National Economic Development Plan, 1972-5, was drawn up in 1972. Formulated as a synthesis of various sectoral programmes, the Plan was for the first time a coordinated e~~ffort to prepare the n~~ation for a new period ahead.

Evaluation of Development Plans

In most developing countries, there is an earnest desire to accelerate the rate of economic growth by means of multi-annual development plans based on national objectives and resources. It is widely recognized that without conscious planning, these developing countries would run the risk of having to remain for a long time entrapped in the vicious circle of underdevelopment. In most countries, state intervention is essential in a medium- or long-term plan in order to coordinate and integrate different measures of restriction, control or encouragement into a coherent and comprehensive whole. At the same time, if the state is not serious about planning, then the plan would become just propaganda or a publicity stunt. This is particularly true in South [illegible]m, especially after so many years of war.

It is true that thus far economic planning in South Vietnam has been little more than the making out of a shopping list of desirable programmes and projects which the country would like to implement in some future date when peace arrives and only if the needed resources can then be found.[4] Moreover, direction at the top is still weak, owing to the lack of a merit system for appointment to high positions in the government and to the heavy concentration of the government on military and political affairs. This weakness of the government in South Vietnam in solving economic problems is neither unusual nor difficult to understand if we take pains to look at its recent history. As a matter of fact, during the colonial period the French did very little to educate and train Vietnamese administrators, and the continuing hostilities ever since have seriously hampered any effort to improve the situation. With the obvious limitations imposed by the war and the heavy military commitment on the part of the economy and the society as a whole, the government has been left with little resources to spare for development purposes. Under these circumstances, conditioned by the uncertainties of the war and foreign aid, by the dearth of human and material resources, and by the lack of reliable data and statistics, a plan could not be formulated in terms of exact and accurate evaluations with its implementation rigidly spread over a fixed period of time. In any case, economic planning need not be so rigid. In South Vietnam, as in some other developing countries in the free world, an approach of flexible planning has been adopted: the national plan, far from having the characteristics of an imperative law, comprises rather a number of coherent and descriptive estimates spread over many years and destined to provide guidance for the activities of both the government and the private sector. Apart from this approach, the new Development Plan of South Vietnam (1972-5) is so tentative that it offers little more than very rough generalizations on development targets. Perhaps as a remedy to these deficiencies, the Plan itself provides that in the process of implementation 'related ministries and agencies must elaborate it [the plan] into detailed annual operational programmes'; that 'every six months the Council of Ministers will appraise the implementation of the plan . . . and to decide necessary adjustment'; and that 'each year, a rolling plan approach is proposed to chart new economic projections for the following years to make the plan more realistic and flexible'.[5]

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[3] *Deuxième Plan Quinquennal, 1962-6*, Direction Générale du Plan, République du Vietnam, p. 6.

[4] Emile Benoit, 'Impacts of the End of Vietnam Hostilities and the Reduction of British Military Presence in Malaysia and Singapore', *Southeast Asia's Economy in the 1970's*, Manila, Asian Development Bank, 1970, p. 709.

Whatever observations one might have from an evaluation of these development plans of South Vietnam, one is certainly the acute weakness of the present administrative structure in the planning, programming and budgeting aspects of government which must be tackled early if good adjustment or postwar reconstruction and development plans are to be implemented with enough efficiency to achieve their intended objectives. Good planning certainly does not end with the formulation of good plans. It must also provide for an effective translation of these plans concrete into actions and good results. It is always much easier to draw up a plan than to efficiently implement it. Yet a plan can be said to be really good only when, if properly carried out, it achieves expected targets. The implementation, and not the formulation of a plan, is thus the decisive stage in the planning process, especially in South Vietnam where much has been said but nothing really positive has come about as far as development planning is concerned. This weakness can only be corrected by the South Vietnamese themselves. To deal with this challenge successfully requires the mobilization of all available national resources, either public or private. Given the present dearth of technical and managerial manpower, and with a view to making planning instrumental to national development, the government must spare no effort to tap the expertise of resource personnel from, and to secure the full cooperation of, the universities whose potential contributions to the national development process will be dealt with in a later section of this paper.

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[5] Nguyen van Hanh, *Briefing on the Four-Year National Economic Development Plan, op. cit.*, pp. 40-41.

SECTION II

DEVELOPMENT OBJECTIVES AND STRATEGY

Social and Economic Policy

The Four-Year Plan, 1972-5, was elaborated by the central planning agency as the first step in the long-term planning process for national development. For this purpose, the planners have charted a long-term development strategy to be used as a guideline or framework for the formulation of objectives and targets for the present as well as future plans. This strategy is based on the five following basic policies or principles: (i) balanced and harmonious growth, (ii) development by planning, (iii) free enterprise, (iv) community development, and (v) promotion of international cooperation.[6]

Thus, in the process of national development, economic growth and social progress must be promoted simultaneously. A high rate of growth of the GNP as well as a rapid increase in per capita income and consumption are to be sought. But, concomitantly, equal opportunities should be offered to people of all social strata to help them fully develop their own ability and personalities, their potential contribution to national advancement, and to profit from the rewards of increasing production. Therefore, steps will be taken to narrow the income gap between the urban and rural population, to adequately provide for social services, especially public health and education, and to reduce the disparity in standards of living and wealth between regions and social classes.

Such a balanced and harmonious development cannot, of course, be expected to emerge as a result of the interplay of market forces alone, but must be gradually and carefully planned and implemented. Planning is also needed for an efficient mobilization of all national resources available and an optimum allocation of these scarce resources among various sectors and projects according to their relative priorities. The degree of governmental involvement in the social and economic fields will, however, be conditioned not only by the constitution and laws, historical and cultural traditions, but also by national needs and the stage of national development.

The private sector will be consulted in the process of formulation of development plans and will be called upon to play its part in their implementation. Private investments, both domestic and foreign, will be strongly encouraged, and industrialists and entrepreneurs will be assisted technically and financially. Government ownership will only cover those areas where a shortage of private capital and entrepreneurial talent arises or where profits seem inadequate to attract private investors. It is, however, the policy of the government to gradually

[6] Tong Nha Ke-Hoach, Saigon, *Ke Hoach Bon Nam Phat Trien Kinh-Te Quoc-Gia,* 1972, pp. II.1-II.4.

turn over to the private sector those industries which become profitable and hence attractive to private investors, and to strictly confine public entreprises to areas which are considered as essential for national defence and public security or are necessary to support the private sector.

In South Vietnam as in other developing countries labour, mainly unskilled, is in abundant supply while capital remains critically scarce. Under these circumstances, community development seems to constitute an appropriate policy to capitalize on this abundant factor of production. Programmes of public interest can thus be carried out with the joint efforts of the government and the people themselves. For instance, in the field of regional development, projects could be proposed and initiated by local communities whose contribution to their implementation in terms of labour and other material resources could be matched with technical and financial support and supervision by the government.

In the process of national development, outside help from friendly countries as well as from international organizations will be sought and international cooperation on a mutual and reciprocal basis will be promoted and strengthened. South Vietnam will welcome opportunities to expand its trade and develop further economic cooperation with all friendly nations in the world, particularly with its neighbours. It will continue to enter into regional and international organizations and to exchange scientific and technical knowledge with other countries.

Development Objectives

Within the framework of these basic principles the main objectives of the present Plan (which have remained very similar to those of the earlier two five-year plans, 1957-61 and 1962-6) aim at achieving stability, economic independence, full employment, and social justice and welfare by the end of the 1970's.[7]

As a result of the protracted and devastating war, the acute imbalance of production and national expenditures, balance of payment difficulties and the perennial deficits in the balance of trade and in the national budget have been deteriorating during the last ten years and have led to heavy inflation and growing dependence on foreign aid. With a view to achieving stability and creating an environment favourable to self-sustained growth, these imbalances are to be progressively removed through rationalization of wage, price and monetary policies, export expansion and import restraints, improvement of the tax system and tax collection, import substitution for goods such as fertilizers, cement, processed foods and textiles, and so on.

Solving the problem of unemployment is another objective of high priority. The economically-active population is increasing rapidly as a result of the current high rate of population growth (at over 3 per cent.), and with the eventual demobilization of the armed forces, any improvement of the employment situation presupposes the creation of a number of jobs far greater than the average increase in the economically-active population, estimated at over 200,000 per year at present but which will rise to around 300,000 by 1980. The economy needs therefore to be modernized and diversified to achieve stability and eventual economic independence. To achieve this requires diversification through progressive industrialization, diversification of agriculture to avoid the risks inherent in two dominant products, rice and rubber, and modernization to improve the still very low productivity in many fields of activities.

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[7] *Ibid.*, pp. II.4-II.12 and *Deuxième Plan Quinquennal*, *op. cit.*, pp. 17-21.

Last but not least, social justice and welfare must always remain, as in all other countries, the ultimate objective of development planning. Special efforts will be concentrated on the development of education, public health, housing, social welfare, infrastructure and public utilities. All citizens will, therefore, be offered equal opportunities to develop themselves fully and put into proper use their own capabilities, to realize their potential contribution to national development, to profit from the rewards of economic prosperity and hence to improve their standards of living.

Development Targets

The above objectives are to be gradually translated into targets assigned to successive development plans starting with the Four-Year National Economic Development Plan, 1972-5. To contain inflation to within 10 per cent. in order to stabilize the economy and to create other pre-conditions for development are some of its major targets. Evidently this could be achieved only if simultaneously other targets of the plan, namely, to increase production, to expand export, to multiply employment opportunities, and to curb population growth could also be successfully carried out.[8]

With a view to increasing national production, the plan lays special emphasis on restructuring the economy, boosting agricultural output and accelerating industrialization. In this respect, the following targets are expected to be reached by 1975 and 1980:

(i) The gross national product is to rise from 921 milliard piastres in 1971 to 1,175 milliard piastres in 1975 and to 1,642 milliard piastres in 1980, thus yielding an average rate of increase of 7 per cent. per year or an increase of 27.6 per cent. in four years or around 100 per cent. in ten years. Per capita income will rise from 49,099 piastres or US$123 in 1971 to 55,656 piastres or US$139 in 1975, and continue to produce an average growth rate of 3 to 5 per cent. per year until the end of this decade. This rate is arrived at on the basis of an annual rate of population growth of 3 per cent. and of an average rate of increase in private consumption of 1 per cent. per year. Private savings will also rise from 0.5 per cent. in 1971 to 20 per cent. of the GNP by 1980.

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[8] Tong Nha ke-Hoach, *Ke Hoach Bon Nam Phat Trien Kinh Te Quoc Gia*, *op. cit.*, pp. III.1, III.7.

(ii) The production structure will be improved to raise the relative contribution of the primary and secondary sectors as compared with that of the tertiary sector. Thus, the relative contribution of all the three basic sectors to the GNP is to change in the way shown in Table II.1.

Table II.1

Relative Contribution of the Three Basic Sectors to GNP, 1971-80

	1971	*1975*	*1980*
	(%)	(%)	(%)
Agriculture	30	34.2	32
Industries	11	13.4	18
Services (including defence and government)	59	52.4	50

Source: Ke-Hoach Bon Nam Phat-Trien Kinh-Te Quoc Gia, op. cit., pp. II.6, III.2.

(iii) At the constant prices of 1971, the value of primary production (including agriculture, forestry, fishery and animal husbandry) will increase from 277 milliard piastres in 1971 to 402 milliard piastres in 1975 – the average increase being at an annual rate of 9.7 per cent., and that of secondary production, i.e. industries, from 101 milliard piastres in 1971 to 157 milliard piastres in 1975, with an average annual growth rate of 11.7 per cent. (see Table II.2).

Table II.2

Value of GNP by Sector, 1971-5
(In milliard piastres and at constant prices of 1971)

	1971	*1975*	*Four-year growth (%)*	*Annual growth (%)*
Agriculture	277	402	45.0	9.7
Industries	101	157	56.0	11.7
Services	543	616	13.4	3.3
GNP	921	1,175	27.6	6.2

Source: Directorate-General of Planning.

Another target is to achieve equilibrium in the balance of trade. Exports will therefore have to be expanded and diversified to include industrial and handicraft products besides rice and rubber whose markets have been shrinking in recent years and whose prices have been falling. According to the plan, increase in production in coming years will permit exports to rise from 14 million US dollars in 1971 to 175 million in 1975, and to 970 million in 1980, of which 80 per cent. will be in agricultural products and 20 per cent. in industrial products. At the same time, imports will be confined to necessary capital goods, raw materials and other essential items which cannot yet be found or produced domestically. Imports will be allowed to rise very slowly from 825 million US dollars in 1971 to 919 million in 1975, and to 1,055 million in 1980. The balance of payments is also expected to greatly improve by 1975, mainly as a result of the efforts to encourage the repatriation of Vietnamese capital estimated to be around 500 million US dollars currently held overseas. In addition, net investments by foreigners are estimated to rise from 2 million US dollars in 1971 to 59 million US dollars in 1975 as a result of incentives provided by the new Investment Law and an improved investment climate.

Regarding the problem of employment, the plan lays focus on the creation of jobs and the improvement of labour productivity and working conditions so as to raise the standards of living of the masses. To attain this target will surely require enormous efforts. With an annual rate of population growth of 3 per cent. and a projected population of 21,112,000 by 1975, the estimated ratio of the economically-active population to total population will be 42 per cent., with the economically-active population rising by 275,000 per annum. The labour supply will be further swelled by the increasing proportion of female workers entering the labour market and by those retrenched from the American sector. This is complicated by the fact that the tertiary sector is virtually saturated while the secondary sector, though with a high annual rate of growth, will not be in a position to absorb more than a small proportion of the expanding labour force. Therefore, a major proportion of the economically-active population will have to find employment in the primary sector which in turn can be developed and diversified only with the restoration of peace and internal security. As is rightly pointed out by the Joint Development Group in 1969, the potential problems are of two kinds. First, there is the immediate problem of finding gainful work for all the people who have been displaced from their previous occupations, or attracted to new ones, by the circumstances of war. These include a majority of the men serving in the armed forces; very large, but fluctuating, number of farm families who have been compelled by the fighting to leave their villages and seek safety in the more populated and better protected areas; and all the men and women, including some of the refugees, who have found profitable, but transient, employment in construction, service and other industries which serve or are related to the war effort. The second type of problem is a long-term and basically a more difficult one: it concerns the maintenance of high levels of employment in an economy in which the labour force may expand more rapidly than work opportunities.[9] If present tendencies continue, it is possible that serious unemployment or underemployment will result before long. The labour force will rise from 7.5 million persons in 1971 to 9.7 million in 1975. But according to the plan, it is expected that by 1975, employment will be provided for only 9.022 million persons (as compared to 7.160 million in 1971) of which the primary sector will absorb 6.230 million (4.722 million in 1971), the secondary sector 0.516 million (0.376 million in 1971), and the tertiary sector 2.276 million (2.062 million in 1971). In this regard, the plan also 'aims at limiting population growth to about 3 per cent. per year before the family planning programme bears fruit'. It is projected that in the coming four years, a family planning centre will be added to each public hospital. It is not specified, however, how this 3 per cent. limitation in the growth rate could be achieved in the meantime. The economic planners thus estimate that unemployment, placed at its lowest 4.2 per cent. of the labour force in 1972, may rise to approximately 6.5 per cent. in 1975, mainly as a result of the demobilization of some 200,000 soldiers in 1974 and an additional 200,000 in 1975 (see Table II.3). They also reckoned that at least 60 per cent. of these war veterans will be absorbed by the primary sector. Under these circumstances, the formula for community development may well be necessary to initiate labour-intensive types of public works in the context of the overall development programme in order to provide jobs for the residual unemployed and for the large army when it ceases to engage in military operations.

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[9] *The Postwar Development of the Republic of Vietnam, op. cit.*, p. 19.

Table II.3

Estimated Population and Employment in South Vietnam, 1971-5
(In million persons)

	1971	*1972*	*1973*	*1974*	*1975*
Total population	18.758	19.321	19.900	20.497	21.112
Projected economically-active population	7.503	7.727	8.159	8.813	9.650
Labour demand	7.160	7.403	7.727	8.243	9.022
In primary sector	4.722	4.970	5.162	5.548	6.230
In secondary sector	0.376	0.400	0.439	0.456	0.516
In tertiary sector	2.062	2.033	2.126	2.239	2.276
Unemployment	0.343	0.324	0.432	0.570	0.628
Unemployment as a percentage of the economically-active population (%)	4.5	4.2	5.3	6.4	6.5

Source: Directorate-General of Planning.

In addition to the purely economic targets mentioned above, the following socio-economic targets are also expected to be achieved by 1975: 4,106 kilometres of roads to be built; 16.5 kilometres of bridges to be completed; 593 kilometres of railroad to be reconstructed; ocean fleet tonnage to be increased to 15,000 tons; compulsory education to reach 95 per cent. of the children between six and ten years of age; illiteracy to drop to 15 per cent.; one doctor for every 7,200 persons to be attained; some 27,800 persons and 10,400 war veterans to be provided with vocational training to become skilled workers; and some 1,800,000 persons displaced by the war to be resettled.

In order to achieve the targets mentioned above, all sources of financing will be tapped, whether they are public or private, domestic or foreign. While lack of data makes it impossible to prepare budgets for financing the plan as a whole, and other proposals on financing are largely limited to costing specific projects in various sectors and to indicating possible financial resources from outside as well as within South Vietnam, the policy of investment emphasizes the maximum mobilization of internal resources, the creation of favourable conditions for the influx of foreign capital, and the avoidance of duplication of effort and consequent wastage. Total investment is to be raised from 7.6 per cent. of the GNP in 1971 to 25 per cent. in 1980. The Four-Year Plan alone will require a total investment of 666 milliard piastres for the plan period as a whole, of which private investment will account for 496 milliard. Annual investment will rise from 70 milliard piastres in 1971 to 202 milliard in 1975 and to 410 milliard in 1980, with the private sector playing an increasingly important role. Public investment will rise from 20 milliard in 1971 to 52 milliard in 1975 and to 102 milliard in 1980, i.e. an increase of 500 per cent. in ten years, while private investment will rise from 50 milliard in 1971 to 150 milliard in 1975 and to 308 milliard in 1980, i.e. an increase of 600 per cent. in ten years.[10] During the four-year period of the Plan, infrastructure will be allotted 43.5 per cent. of the total government investment while industries will absorb 23.8 per cent.; and of the total private investment, 47.2 per cent. will be directed to agriculture and 28.6 per cent. to industries.[11] (see Table II.4). Private domestic savings are expected to rise from 90 milliard piastres in 1971 to 123 milliard in 1975, i.e. a net increase of 37 per cent. during the plan period. Foreign savings, comprising foreign investment, repatriation of Vietnamese capital presently held overseas, loans from international institutions and foreign governments, and foreign aid are expected to increase from 520 million US dollars in 1971 to 614 million in 1975. American aid is projected to taper off from 568 million US dollars in 1971 down to 440 million in 1975. To compensate for the decline in American aid, aids and loans from other countries are expected to rise from one million US dollars in 1971 to 15 million in 1975 and from 10 million US dollars in 1971 to 90 million in 1975, respectively (see Table II.5). According to the priority order set up by the plan,

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[10] Tong Nha Ke-Hoach, *Ke Hoach Bon Nam Phat Trien Kinh Te Quoc Gia, op. cit.*, p. II.6.

[11] Nguyen Van Hanh, *Briefing on the Four Year National Economic Development, op. cit.*, pp. 29-31.

Table II.4

Projected Investments by Sector, 1971-5
(In milliard piastres at 1971 constant price)

	1971	*1975*	*Percentage Increase 1971-5*
Agriculture	23.5	84.0	257
Government investments	4.0	8.0	100
Private investments	19.5	76.0	290
Industries	16.0	58.0	262
Government investments	5.0	13.0	160
Private investments	11.0	45.0	309
Services	30.0	60.0	100
Government investments in public utilities	9.0	21.0	133
Government investments in social infrastructure	2.0	10.0	400
Private investments in services	19.0	29.0	49
Total	70.0	202.0	189

Source: Directorate-General of Planning.

the sectors that need foreign aids and loans most are agriculture, agriculture-supporting and agro-based industries, export-oriented industries, industries producing equipment and intermediate products, infrastructure, education, and public health.

Sectoral Development Programmes and Projects

To achieve the above-mentioned objectives and targets, several specific programmes and projects have been recommended by the economic planners to be implemented during the next four years covered by the plan. They are not presented in detail, but rather in outline, and do not yet constitute operational projects fully ready for implementation. All still require further elaboration and refinement. However, while the items and details of these programmes and projects are susceptible to changes and corrections, they are nevertheless a reasonably accurate estimate of what South Vietnam would try to do to achieve economic independence by the end of this decade. These recommended programmes and projects concern various fields ranging from agriculture, industry, infrastructure, manpower development to culture and education, social welfare, and regional development.

The agricultural portion of the plan is mainly based on the Five-Year Rural

Table II.5

Foreign Savings, 1971-5
(In million US dollars)

	1971[a]	1972[a]	1973[b]	1974[b]	1975[b]
American aid	568	580[c]	530	490	440
Commerical import programme (CIP)	244	332	300	250	190
Public Law 480, Title I	74	132	90	70	50
Direct aid	250	160	100	120	150
Economic support fund	0	26	40	50	50
Commercial aid from other countries	1	2	5	10	15
Foreign loans	10	12	30	50	90
Net Foreign investments and other transfers	9	15	57	71	79
Gross foreign savings	588	609	622	621	624
Less charges in foreign exchange reserves and capital Reimbursements etc.	-69	-17	-12	6	-10
Net foreign savings	519	592	610	615	614

Sources: [a] National Bank of Vietnam.
[b] Directorate-General of Planning (projected figures).
[c] Joint Economic Office, The Embassy of the USA in Vietnam (including 30 million US dollars from the aid programme of the Department of Defence).

Economic Development Plan, 1971-5 prepared in 1971 by the Ministry of Land Reform, Agriculture and Fishery Development. It calls for an increase in overall production through the intensification, diversification and modernization of agriculture. This embraces not only existing crop land, including 2 million hectares of highly productive soil in the Mekong Delta, and the land in all other regions which have continued to produce during the war but in which yields per hectare can be dramatically improved by water control, new crop varieties, increased use of fertilizers and pesticides, and better methods of cultivation, but also extensive areas of cultivable land which have been temporarily abandoned by farmers during the fighting. The object is to produce enough food to meet domestic requirements which will increase rapidly under the influence of a high rate of population growth and an expanding industrial sector, and to provide surpluses for export to earn foreign exchange to pay for necessary imports. To achieve this object, special emphasis has been laid by the Plan on the expansion of planted areas, and an increase in the production of the six main crops, namely, rice paddy, sorghum, corn, rubber, sugar cane, and banana (see Table II.6). These

Table II.6

Projected Planted Areas and Production of Some Main Crops, 1971-5
(Production in 1,000 tons and areas in 1,000 hectares)

	1971	*1975*	*Percentage of increase*
Rice paddy			
Area	2,520	2,600	3.2
Production	6,717	7,595	13.1
Sorghum			
Area	15	100	566.7
Production	37	300	710.8
Corn			
Area	34	57	67.6
Production	48	114	139.5
Rubber			
Area	107	135	26.2
Production	37	70	89.2
Sugar Cane			
Area	17	64	276.5
Production	600	3,300	450.0
Bananas			
Area	20	31	52.9
Production	279	594	112.9

Source: Five-Year Rural Economic Development Plan, 1971-5.

projects alone require an amount of investment of an order of magnitude of 751,451 million piastres and 75,336 million US dollars (see Table II.7).[12] In addition, six other projects on tea, vegetable, tobacco, coffee, tree fruits, and other secondary crops, have also been recommended.

Table II.7

Projected Investments for Some Main Crops, 1972-5

	National budget (In thousand piastres)	*Foreign exchange (In thousand US dollars)*
Rice paddy	102,400	*
Sorghum, corn	166,400	20,500
Rubber	332,800	2,240
Sugar cane	121,984	52,796
Bananas	27,868	*
Total	751,452	75,336

Source: Director-General of Planning
* Nil.

With respect to forestry, the plan calls for a rational balance between reforestation and proper exploitation. Lumber production is thus projected to increase from 700,000 cubic metres in 1971 to 2.5 million cubic metres in 1975, or an increase of 257.14 per cent. in five years. Necessary investments projected for the whole programme will amount to 544,320 million piastres. With the average domestic demand for construction timber estimated by FAO at 0.075 cubic metre per head for Asia, South Vietnam will achieve a lumber surplus for export of 362,725 cubic metres in 1974 and 916,800 cubic metres in 1975 (see Table II.8).

Table II.8

Projected Surplus of Construction Timber, 1972-5
(In thousand cubic metres)

	1972	*1973*	*1974*	*1975*
Lumber production	1,000	1,400	1,900	2,500
Domestic demand	1,449	1,492	1,537	1,583
Surpluses (3) or deficits (-)	-449	-92	+363	+917

Source: Director-General of Planning.

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[12] It will be seen that investment in this case is separated into Vietnamese piastres and US dollars. This is done in the plan itself. It is believed that the investment in the form of piastres is intended for local expenditure and the investment in US dollars is for imports, particularly of machinery and other essential materials.

Lying along the continental coast of Southeast Asia, South Vietnam, with a coastal length of 2,500 kilometres, abounds with a wide variety of marine fish. The numerous internal ponds and rivers also provide an additional resource in the form of inland fishing. The fishery development programme comprises several projects requiring a total investment of 1,784 milliard piastres and 69,650 million US dollars. It proposes an increase in the area of farm fishponds, the establishment of fishponds in the brackish water coastal areas, fish hatcheries to produce fish fry for stocking purposes and canning factories and processing plants, the creation of modern facilities complete with storage buildings, and the development of deep-sea fishing drafts, efficient transportation and marketing. Farmers and fishermen will be trained to improve their fishing skills, fishing boats will be further motorized, and inland and offshore fishing will be vigorously encouraged. As a result, the fish catch is expected to rise from 651,000 tons in 1972 to 966,000 tons in 1975. This would be more than sufficient to meet domestic needs (see Table II.9), and permit an increasing surplus for exports (see Table II.10).

Table II.9

Projected Domestic Needs for Fish Products, 1972-5

Year	*Consumption per capita per year (In kilogrammes)*	*Total domestic needs (In metric tons)*
1972	30	579,630
1973	31	616,900
1974	32	655,904
1975	33	696,696

Source: Directorate-General of Planning.

Table II.10

Projected Surpluses in Fish Products, 1972-5
(In metric tons)

	1972	*1973*	*1974*	*1975*
Total production	651,000	731,000	816,000	966,000
Total domestic needs	579,630	616,900	655,904	696,696
Surpluses	71,370	114,100	160,096	269,304

Source: Directorate-General of Planning.

Besides rice, other crops, and fish, South Vietnam will also be in a position to produce more livestock and livestock products, such as pigs, chickens, ducks, buffaloes and cattle. With the anticipated production increase of rice, feed grains and oil seeds, the feed problem, one of the major factors limiting livestock development, will be resolved. The climate and other environmental features of the Mekong Delta provide ideal conditions for duck raising, the Central Highlands for dairy cattle, while hogs, chickens and beef cattle have also shown wide adaptability to the various climatic zones found in the country. In this regard, several projects have been recommended with an overall investment totalling 896 million piastres and 166,755 million US dollars. The intention is to improve livestock breeds and feed, to introduce vaccines, to train livestock specialists and extension workers, and ultimately to increase livestock production from 89,156 million piastres in 1971 to 140,936 million in 1975, an increase of 58.1 per cent. (see Table II.11). These increases will not only permit greater local consumption of livestock products but will also allow South Vietnam to resume exporting pigs, frozen pork, ducks, eggs and egg-powder.

Table II.11

Projected Livestock and Poultry Population, 1972-5
(In thousand heads)

	1972	*1973*	*1974*	*1975*
Buffaloes	577	594	618	640
Beef cattle	873	942	1,030	1,150
Hogs	4,750	5,225	5,850	6,660
Chickens	27,160	31,230	36,500	43,800
Ducks	18,400	20,600	23,600	27,800

Source: Five-Year Rural Economic Development Plan, 1971-5.

Annual investments in the primary sector as a whole are estimated to more than triple in five years (see Table II.12).

Table II.12

Project Annual Investments by Sector, 1971-5
(In billion piastres)

	1971	*1972*	*1973*	*1974*	*1975*
Public sector	4.0	5.0	6.0	6.5	8.0
Private sector	19.5	37.0	55.0	66.0	76.0
Total	23.5	42.0	61.0	72.5	84.0

Source: Directorate-General of Planning.

In addition, in the four years of the Plan under consideration, an additional 409,000 hectares of rice-field will be served by irrigation, pilot plantations using modern and mechanized implements will be established, and production of agricultural machineries will be encouraged. Agricultural credit will be expanded and the working capital of the Agricultural Development Bank will be increased to 15 billion piastres within the first year of the plan.

The industrial portion of the plan projects a contribution by the secondary sector to the GNP of 13.4 per cent. by 1975 as compared with 11 per cent. in 1971, thus giving an average annual growth rate of 11.7 per cent. Industrial production, the value of which will reach 157 billion piastres by 1975 from 101 billion in 1971, will be made up of the following: manufacturing 71.7 per cent., construction 14 per cent., electricity 11.3 per cent., and mining and handicrafts 3 per cent. The proportion of output from processing industries, such as beverages and tobacco, to total industrial production will diminish, while textiles, food products, and other manufacturing industries will increase. The plan thus gives high priorities to manufacturing industries, mining and handicrafts, electricity for domestic use, import substitution and export expansion (see Tables II.13 and II.14). In this regard, the following major projects are recommended for the next four years of the plan:

(i) A plant producing urea from naphtha will be set up in Can Tho with a total investment by the government amounting to 60 million US dollars and 24 billion piastres; the projected production capacity of the plant will be 198,000 tons per year.

(ii) A plant for the manufacturing of diesel engines and agricultural machineries will be established in Can Tho, with an annual production capacity of 10,000 diesel engines and 2,000 two- and four-wheeled tractors (40 per cent. of the parts will be locally made); the investment of 2.5 billion piastres for this project will be jointly financed by the public and private sectors.

(iii) An insecticide plant, which will require a total investment of one billion piastres and expected to yield an average annual production of 2,000 tons per year, is to be located in Can Tho.

(iv) Ten to fifteen pilot cold storage facilities are to be built at various fishing ports, such as An Xuyen, Ba Xuyen, Bac Lieu, Binh Thuan, Con Son, Phu Yen, Quang Ngai to handle more than 10,000 tons of catch per year. Each of these plants will be able to store thirty tons of catch at a time. Total investment projected for these plants will be in the region of 375 million piastres.

(v) A fishing-net producing plant with a production capacity of 1,000 tons per year and a total investment amounting to 500 million piastres will be set up somewhere in central South Vietnam.

(vi) An offshore fishing project, which calls for the procurement of ten high-sea fishing boats of 100 to 200 tons each and equipped with modern fishing gears, requires an investment reaching 2.5 billion piastres.

(vii) A plant for manufacturing livestock feed will be established either in Bien Hoa or Da Nang. This will have a productive capacity of 50,000 to 100,000

Table II.13

Projected Value-added and Contribution of Some Major Branches to Industrial Production, 1971-5

(Value-added in million piastres and contribution in percentage)

	1971		*1975*	
	Value-added	*Contribution*	*Value-added*	*Contribution*
Food products	10,672	14.5	22,528	20.0
Beverages	39,965	54.3	41,070	36.5
Tobacco	9,568	13.0	9,011	8.0
Textiles	8,464	11.5	15,769	14.0
Other manufacturing industries (cement, rubber, electricity etc.)	4,931	6.7	24,261	21.5
Total	73,600	100.0	112,639	100.0

Source: Directorate-General of Planning.

Table II.14

Projected Annual Investments by Major Industrial Branches, 1972-5

(In million piastres)

	Total	*1972*	*1973*	*1974*	*1975*
Manufacturing	134,293	22,300	31,316	37,168	43,509
Construction	21,086	3,636	5,850	5,800	5,800
Mining and handicrafts	4,412	828	1,100	1,242	1,242
Electricity	22,709	4,236	4,734	6,290	7,449
Grand Total	182,500	31,000	43,000	50,500	58,000

Source: Directorate-General of Planning.

tons per year, and will require a total investment of 400 million piastres.

(viii) A plywood plant, to be established either in Bien Hoa or Da Nang, will require a total investment of 2 billion piastres, and will produce an average of 35,000 tons per year.

(ix) A paper and pulp mill is to be built either in Can Tho if raw materials to be used are bamboo and rice straw, or in central South Vietnam if pinewood is used. It is projected to produce 50,000 tons of paper and 100,000 tons of pulp per year and will absorb an investment of 18 billion piastres.

(x) Five canning factories requiring an estimated investment of 1.25 billion piastres are planned for various parts of the country, such as Ben Luc, Phan Thiet, Rach Gia. Each will have a productive capacity of 10 million cans per year.

(xi) One plant producing ready-made clothing will be established in Saigon and another either in Can Tho, Da Nang or Nha Trang, with a total estimated investment of 400 million piastres and an annual productive capacity of 1.8 million garments each.

(xii) As for the textile industry, 80,000 spindles and 2,000 automatic looms are to be added to the present capacity, and this will cost an investment of about 10 billion piastres. An amount of 4 billion piastres also will be investment in a new factory to produce 4,000 tons of rayon from bamboo per year and 3 more billion piastres in another to produce 2,000 tons of nylon per year.

(xiii) A project envisaging the production of 5 million flourescent tubes (of the sizes 0.3, 0.6, and 1.2 metre) per year is to be implemented with an investment of 600 million piastres.

(xiv) A glass factory planned to produce 7,000 tons of window glass per year will be established with an investment of 1.5 billion piastres.

(xv) Two plants, with an annual production of 6 million litres of milk from 1,200 tons of soya bean and 60 tons of sugar, are recommended involving an investment of 800 million piastres.

(xvi) The Kien Luong Clinker Factory and the Ha Tien Cement Factory will be expanded to raise their annual production from 300,000 tons to 900,000 tons. Additional investment needed will be around 11 billion piastres.

(xvii) Three new sugar mills are to be built at the cost of about 7.5 billion piastres. An additional amount of 4 billion piastres will be invested for the development of sugar-cane plantations in Binh Dinh, Chuong Thien, Hung Loc, Phan Rang, and Phong Dinh.

(xviii) A plant producing tyres and tyre-tubes with projected production of some 500,000 units of all sizes will need an investment of about 4 billion piastres.

(xix) An oil refinery will be set up either in Nha Trang or Da Nang with a productive capacity of 2,000,000 tons per year and this will require an investment of 15 billion piastres.

Mining will also receive due attention with a view to prospecting and exploiting minerals such as limestone in Ha Tien, Long Tho, and Van Xa, silica sand in Cam Ranh and Nam O, and salt in Hon Khoi and Sa Huynh. With respect to offshore oil, the government will negotiate with international oil firms on the terms and conditions of exploration and eventual exploitation.

In pursuit of a balanced and harmonious development, apart from the projects mentioned above, the plan also envisages to strengthen and modernize the national social and economic infrastructures, to develop manpower, to enrich and improve the cultural and educational system, and to promote social welfare and regional development. In this regard, the following types of measures have been proposed: handicrafts and industries to be developed and brought to the countryside; the integration of agricultural and industrial development wherever they can complement each other; special programmes for underdeveloped provinces; the creation of industrial complexes at Cam Ranh, Can Tho, Da Nang and export processing zones at Cam Ranh, Long Binh, Saigon, Thu Duc, Vung Tau; large irrigation and flood control schemes; rural electrification; and the improvement of all kinds of transportation, housing facilities, water supply, and postal services.

Policy Instruments

The key to understanding the Republic of Vietnam's problems of adjustment to peace and postwar development is the realization of the extraordinary extent to which its economy has become structurally dependent upon the continuation of war. The heavy reliance on external resources for conducting the war and running the war-time economy has resulted in a heavy import dependence which has been further reinforced by governmental institutions and business attitude. The government has favoured imports because a large proportion of its revenues has been obtained from import taxes and from profiting on the difference in the exchange rates at which it obtains dollars from the US government and sells these to importers. Furthermore, there is preference for US PL480 surplus food and other aid-financed imports since they generate counterpart funds which provide supplementary sources of budget revenues in a form that is far easier to obtain than taxes. On the other hand, the South Vietnam business community favours importing because that is what it is used to and knows how to handle, and because it provides maximum quick profits and a cover for capital flight by over-inventorying of imports (with the excess value deposited in a foreign currency to the account of the importer or his agent in a foreign bank). It must, moreover, be added that import dependence has also been encouraged by US government policies which insisted on detailed programming of its economic aid in terms of imports as a matter of administration convenience and control, and to help promote US exports.[13]

In an economy subject to dangerous pressures of war-time inflation but apparently lacking the capacity to levy a substantial volume of taxes except on imports, this is, no doubt, an expedient solution – provided the US government is willing to finance the import surplus. However, this type of expedience clearly could not offer a long-term solution. South Vietnam must start moving towards the elimination of its exaggerated import dependence and the capital flight, and the sooner the better if it is to achieve survival. Hence, efforts must be deployed and government policies developed to pave the way for import reduction and export expansion. The importation of luxuries and other low-priority items and the dissipation of foreign exchange in capital flight must be rigidly and effectively checked.

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[13] Benoit, *Southeast Asia's Economy in the 1970's*, *op. cit.*, p. 701.

Rapid expansion of domestic production and efficient marketing of domestically produced supplies, especially food, are required to gradually replace imports and increase exports. In this regard, rice, fish products, vegetable oils, oil cakes, cinnamon and peanuts, the world prices of which are substantially high, should be capable of considerable and rapid expansion as a result of the diversification, intensification, and modernization of primary production.

However, the greatest long-term potential is probably in the development of export-oriented industries based on the processing of abundant indigenous materials such as lumber products, frozen and canned fish, shellfish, fruit juices, and possibly petroleum (should present exploration be successful). Great care should, however, be taken to confine investment to industries that have reasonable hope of becoming competitive after the initial stage, without the continued protection of traiffs, quotas, or subsidies. The products should not require advanced technology or skills or very heavy investment and should be produced at low unit costs. In the four coming years of the plan, industries will be oriented toward supporting agriculture, substituting imports, and promoting exports. Development priorities will thus be given by the plan, in decreasing order to (i) agriculture-supporting industries, (ii) industries based on local raw materials and export-oriented, (iii) import-substituting industries which use domestic raw materials, and (iv) labour-intensive industries which, though using imported raw materials, produce substantial value-added output.

In view of the peculiar structural dependence of the economy on imports, the prospective stabilization of imports and shift of emphasis to domestic production and exports will require profound changes in fiscal and monetary programmes. The economic planners are fully aware that price policy must be revised and improved and that the broadening of the tax base and the strengthening of South Vietnam's taxing capabilities are clearly indispensable for the purpose. Rational price, credit and fiscal policies are thus proposed to improve the financial position of the government, to encourage savings and investments, to promote exports, and to reduce imports. In this regard, many of the recommended reforms to be put into effect have already been launched.

(i) Prices have been gradually set free to seek their own levels according to market forces; government's interference would take place only when it appears indispensable and desirable with regard to the interests of the masses, producers or consumers, for instance, to regulate the prices of essential commodities, agricultural products, particularly rice.

(ii) Interest rates have been raised to a level high enough to attract savers but not too high to discourage investors. As a result, savings and fixed deposits have substantially increased during the last two years, from 35.3 billion piastres in 1970 to 67.6 billion in 1971.

(iii) In lieu of an overvalued fixed rate of exchange artificially maintained over the years, South Vietnam now adopts a realistic and flexible rate that frequently readjusts itself to market conditions. With black market transactions of foreign exchange becoming unprofitable, it is now possible for the government to simplify or do away with most administrative controls and red-tape regulations. No longer do investors worry about large and unexpected changes in the rate of exchange. At the same time, the new exchange rate structure makes export of South Vietnamese products possible, hence opening up new opportunities for profitable investments in export-oriented industries.

(iv) Not long ago, South Vietnam had a very complicated tariff system which comprised some 290 different rates ranging up to 1,000 per cent. of the c.i.f. prices of various imported commodities. The system resembling in practice a protective rather than a revenue tariff as originally conceived, was too cumbersome to be efficiently enforced. It also led to corruption, encouraged smuggling, and was the direct cause of substantial losses for the nation's coffers. It has recently been simplified and reduced to only four rates. Apart from making the regulations easier to enforce, it also serves to create a more attractive investment climate. According to the new tariff, commodities essential for the development of the country, such as capital equipment, spare parts, and raw materials not available locally, can now enter South Vietnam duty-free. Four duty rates of 25, 50, 100, and 200 per cent. are to be placed on other imports according to their priorities for national needs.

(v) The law No. 4/72 often referred to as the New Investment Law, was promulgated on 2 June 1972 to 'regulate the investment regime in Vietnam'. It offers quite a few advantages to imminent investors, whether in the industrial, agricultural or technical fields, provided they meet certain priority criteria – such as foreign exchange earning potential, generation of job opportunities, use of indigenous raw materials and potential contribution of the whole project to the national economy. The privileges reserved for any approved project are many and quite substantial. In the first place, the law grants the same treatment to both foreign and South Vietnamese enterprises. There is no upper limit to foreign ownership. In the second place, foreign investors are allowed to remit in hard currency their full shares of earned profits at the rate of exchange prevailing at the time of actual remittance. Other important privileges include a five-year exemption of profit tax, duty exemption not only for imported capital equipment but also for spare parts and other operation supplies and materials, and a five-year exemption from a host of taxes related to doing business, acquiring or transferring real estate, borrowing money, transferring securities and others. However, the five-year profit tax holiday may be terminated should during this period the initial investment be recovered through distributed profits. In addition, if an approved project requires an essential foreign technician, the Board of Investment may recommend that he be exempt from income tax for three years. Finally the law explicitly guarantees investors against nationalization and creation of competitive government-owned enterprises.

Together with the above reform programme, the government has created and strengthened some important development agencies with a view to promoting investment and foreign trade, as well as assisting potential investors. Along this line, the Industrial Development Centre was converted in May 1971 into the Industrial Development Bank whose efforts will be concentrated on investment financing and building profitable industries. The Export Development Centre, a long dormant agency, has also been revived and strengthened to promote exports by granting to exporters a preferential exchange rate, credit on special terms, and other benefits as well as by looking for and consolidating foreign markets for local products. SONEDEZI – a government agency (in charge of developing industrial complexes) which for years has been offering at moderate prices plant sites in well-planned and developed industrial zones complete with access and other public utilities – has recently expanded its operations to cover Can Tho in the Mekong Delta and Da Nang in northern South Vietnam as well. Moreover, plans are now being drawn to convert the huge US army base at Long Binh into another industrial park which will include an export processing zone. A National Economic Development Fund was also formed in February 1972 with an initial capital of 10 billion piastres to extend medium- and long-term credit on favourable terms to new economic ventures. Since it operates through such local banking institutions as the Industrial Development Bank, the Agricultural Development Bank and SOFIDIV (the Industrial Development Einancing Corporation of Vietnam), it will serve to strengthen the local banking community and broaden the scope of activities of some of the commercial banks.

Another important reform under consideration concerns the tax structure. South Vietnam has inherited an immensely complex tax system beyond the grasp of most people except perhaps some of the best tax consultants. Over the years it has become a patchwork with the old colonial tax system over-laden with numerous amendments and additions. In its present state, it is ill-prepared for peace and is basically unproductive, inequitable and inefficient. Consolidation and simplification are needed. It should be based on income and wealth, contain a broad base tax on consumption and a selected excise tax system. In the process of national development planning, tax reform has therefore been considered as a major instrument to induce and facilitate a balanced and harmonious growth. The main goals to be achieved are (i) to provide funds needed for public investment projects, i.e. to allocate resources from private consumption to public investment, (ii) to contribute to an efficient use and allocation of resources within the private sphere for maximum output and growth, i.e. to maximize private savings and investment and curtail conspicuous consumption and speculative activities, (iii) to contribute toward a better distribution of income without blunting incentive to work, save, and invest, and (iv) to make the tax system easy to understand, comply with, and enforce.[14] In this regard, legal and governmental changes are needed to enlarge revenue sources from taxes as well as to increase their yields. Many measures have been recommended by experts and economic planners. On the one hand, the tax system will be restructured to raise the contribution of internal taxes from 20 to 50 per cent. of the total national expenditures. It is suggested that the patent (business license tax) should be converted to a gross income base and changed eventually into a value-added tax and that fuller exploitation of certain excise taxes should be achieved. For instance, the production tax should be extended to embrace all the large firms in the service-producing sector, many of the excises changed from specific to *ad valorem* taxes, a value-added tax introduced to gradually replace the current complicated production tax, income tax simplified and consolidated, and many small trivial taxes done away with altogether. New legislation embodying the above fiscal policy will be promulgated soon to make taxes easier to assess and enforce. Along this line, troublesome procedures will be discarded and severe sanctions provided to ensure compliance from the tax-payers and to deter corruption and lethargy on the part of the tax-collectors. On the other hand, tax administration will be strengthened and tax enforcement personnel increased quantitatively and qualitatively since tax reforms can only move as fast as the administration can be improved.

Suggestions are also made for ways to improve expenditure decisions through a better use of the budget. The basic shortcomings of the traditional (line item) presentation, the lack of forward planning, programme selection, establishment of priorities and assessment of cost effectiveness are noted. It is recommended that progression to a programme budgeting process should be initiated at first in one selected area of activity and then expanded when experience has been gained and trained staff become available. Proposals for greater flexibility, for the control and limitation of subsidization of local authorities, and for further delegation of central government developmental activities to provincial and village governments are made.

Role of the Private Sector

It is sometimes said that a primary problem of a developing economy that is starting from a low level of income and output is to adopt policies to transfer resources from the private to the public sector. Likewise, in South Vietnam, there is room for disagreement regarding the relative emphasis which should be given to the public as compared to the private sector in a development plan. No one would dispute that the government will have to play an important role in the process of national development. In addition to the need to provide economic infrastructure in such forms as transportation, power, flood control and ports which are necessary for productive investment to be effective, there are always extensive social demands for housing, health and education. Besides these basic capital needs, public sector investment programmes aim at providing guidance and act as catalysts to the private sector as well. To achieve a satisfactory rate of growth, the energies of both the public and private sectors are thus needed to complement and strengthen each other in undertaking productive investment, in marketing products, and in carrying on the many commerical activities of a growing economy. The economy of South Vietnam has been, and will remain, an open economy unless radical political changes from the present situation should take place in the near future. Free enterprise has been practised, and will remain one of the five basic principles of the development strategy adopted by the current Four-Year Plan. The government has shown its determination to take necessary measures to create a favourable climate for the development of private initiatives and investments. Public sector activities will be strictly restricted to areas of necessity for national defence, public security, and support indispensable programmes for the development of an efficient private sector.

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[14] *The Postwar Development of the Republic of Vietnam, op. cit.*, Vol. I. pp. 61-95; and Tong Nha ke-Koach, *Ke-Hoach Bon Num Phat-Trien Kinh-Te Guoc-Gia, op. cit.*, pp. IV.2-3.

The majority of fixed investment in the country in recent years has originated in the private sector. This is not so much the result of doctrinal considerations but rather for practical reasons – the high costs of running the war and the presence of a relatively strong private sector to serve as a basis. The proportion of public investments to total public expenditures varied from 10 per cent. in 1968 to 6 per cent. in 1969, to 4 per cent. in 1970, and to 11 per cent. in 1971. Moreover, these have mainly been expenditures for the procurement of operating materials and reconstruction of war-damaged structures rather than for real developmental purposes and further construction of additional infrastructures. In any case, the public sector has contributed only 12 per cent. of total investments in 1968 (3.9 billion piastres out of a total of 31.2 billion), 13 per cent. in 1969 (7.4 billion piastres out of 55.5 billion) and 28 per cent. in 1971 (20 billion piastres out of 70 billion). This is an unnaturally low figure as in many other developing countries under normal conditions public investment typically ranges between 40 and 60 per cent. of the total. In the next four years of the plan, public investments are projected to rise from 20 billion piastres in 1971 to 55 billion (out of a total of 202 billion) by 1975. By then, the proportion will be 26 per cent. of total investment.

The private sector has thus been given a significant part to play in the economic life of the nation. Private investments swelled from 27.3 billion piastres (out of a total of 31.2 billion) in 1968 to 48.1 billion piastres (out of 55.5 billion) in 1969, and to 50 billion piastres (out of 70 billion) in 1971. Most of these investments were for the procurement of capital equipment and for construction. Private investment is also projected to reach 150 billion piastres (out of 202 billion) by 1975.[15]

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[15] Tong Nha ke-Hoach, *Ke-Hoach Bon Nam Phat-Trien Kinh-Te Quoc-Gia, op. cit.*, pp. I.4-5. V.2-3.

The plan does not, however, consider every case in detail as to where the public and private sectors meet and divide responsibility. What has been done by the experts and economic planners thus far is just to outline the basis for an open economy -- one that can take advantage of individual initiatives as well as group actions for the benefit of the whole country. The responsibilities for development respectively assumed by the public and the private sectors could, however, divide roughly along traditional lines. The government will be vested with the responsibility of investment in the development of social and economic infrastructures such as road, transportation, education, health, urban housing, water supply, power, particularly rural electrification, and flood controls. Investment in manufacturing, commerce, trade, and finance which has in the past primarily originated in the private sector with perhaps a few specific exceptions such as textiles, cement, sugar and paper will be mainly left to private initiative. The government also nourishes the intention, and in some instance has actually taken steps, to divest itself of investments in manufacturing industry and gradually turn these activities back to the private sector. It is hoped that the process of divestment can smoothly be achieved in the near future. There may well be other cases where mixed ventures are preferable, possibly in instances of very large-scale investments, for example in fertilizer production and oil refinery.

Finally and most important, it is generally believed that the private sector will satisfactorily fulfil its role in the process of national development providing it is free from unnecessary controls and regulations in starting a risky venture and carrying it through. On this point, apart from the New Investment Law, great efforts have also been deployed to create an attractive investment climate. An Investment Service Centre was thus established in March 1972 to seek ways to promote investments and assist investors in the fulfillment of various administrative procedures. It comprises two offices, namely, the Board of Investment and the Office of Investment Services. The Board of Investment, composed of high-ranking officials representing various government departments or agencies directly concerned with the promotion and coordination of investment in South Vietnam and representatives from private industrial and business sectors, and chaired by the Minister of the Economy, will conduct studies on such matters as taxation and labour, identify problems and recommend ways for surmounting them, develop and recommend new investment policies, and specific investment opportunities. The Office of Investment Services, on its own part, will seek to promote investments by publicizing profitable investment opportunities through brochures, notices in the mass media, and direct contact with potential investors, and by speeding up the necessary formalities regarding the screening and processing of investment projects.[16]

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[16] Nguyen-dang-Khoi, 'Toward an Attractive Investment Climate', *Vietnam Report* (1 September 1972).

Administrative Machinery for Planning and Implementation

As mentioned earlier, the process of national development planning in South Vietnam was disrupted for several years by political and military upheavals following the overthrow of the late President Ngo-dinh-Diem in late 1963. Although there were intermittent development efforts since the establishment of the Joint Development Group in February 1967, an overall national development plan did not emerge until mid-1972. The new Plan marks the renewed efforts by the recently revived administrative machinery for planning which has been very much strengthened with the creation of the Ministry of National Development and Planning in June 1971. Three other major organizations were also established to assist the new ministry in the formulation of the Plan.

(i) The Committee for Coordination of National Economic Development Planning, created by the Prime Minister in February 1972 and headed by the Minister of National Development and Planning, is composed of seventeen representatives from various government departments and agencies. Its responsibility is to chart the general course of development, fix the plan objectives and targets, direct the work of the Planning Group, and revise and submit the final draft of the Plan to the Cabinet for approval.

(ii) The Advisory Committee, comprising prominent scholars, university professors, businessmen, industrialists, as well as representatives of various trade associations, gives advice to the Coordination Committee on all matters regarding the technical aspects of the plan.

(iii) The Planning Group, which includes twenty-eight specialists from the Ministry of National Development and Planning and forty-two others from various government departments and agencies, is divided into nine special sections: Economics and Finance, Agriculture, Industry and Handicraft, Infrastructure, Manpower, Public Health, and Social Welfare, Regional Development, Administrative Reforms and Statistics. Its assignment is to ensure necessary coordination between different departments and agencies concerned, collect and analyze available data and documents, integrate sectoral programmes and projects into the overall plan, and report to the Coordination Committee.

The two constitutional Councils of Economic and Social and Ecudational and Cultural Affairs have also been duly informed and consulted in the planning process.

To ensure an efficient administrative structure for implementation, the Four-Year National Economic Development Plan itself lays special emphasis on tackling the serious weakness of the present governmental structure in the planning, programming and budgeting aspects. The administrative machinery for planning and implementation will be reformed and strengthened. It will be provided with more capable personnel and facilities to better cope with the technical aspects of planning, and to efficiently undertake the coordination and preparation of sectoral programmes for the overall Plan. The budget and foreign aid administration will also be attached to the Central Planning Agency in order to ensure an optimal allocation of resources in accordance with the overall plan and to facilitate the introduction of the programme budgeting process. The planning section within each ministry will be strengthened both in personnel and in facilities, and regional development agencies created, to effectively assist and represent the Central Planning Agency in formulating plans and supervising their implementation at the sectoral and regional levels.

The evaluation responsibility will rest with a supreme committee which consists of three bodies: the Office of the Prime Minister, the Cabinet and the Council of Ministers.[17] The progress on the implementation of various programmes and projects will be regularly reported to the Office of the Prime Minister by the departments and agencies concerned. The Office of the Prime Minister will submit the results of the plan implementation to the Cabinet for evaluation. On its part, the Council of Ministers will appraise these achievements every six months and decide necessary modifications and adjustments to the plan. And to make the plan more realistic and flexible, each year a rolling plan will chart new economic projections for the following year.

To further improve the machinery for planning and implementation, special attention will be given to administrative reforms and the consolidation of various departments of statistics with a view to making public administration more efficient. It is also recommended that a technical and scientific research institute and an institute for economic research be created to conduct applied research in various fields and to train managers and technical personnel essential for national development planning.

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[17] The difference between the Cabinet and the Council of Ministers is that while the former is chaired by the Prime Minister and includes all ministers and vice-ministers, the latter is chaired by the President of the Republic and excludes all vice-ministers.

SECTION III

MAJOR PROBLEM AREAS

Technical Problems of Planning

The inability of the government in solving all economic problems is not unusual in a developing country. But in the case of South Vietnam, the protracted and devastating war has made this deficiency especially crippling. As a result, not only is there a persistent and dangerous failure to cope with economic problems as they arise, but the planning agencies also have to confront with more and more serious technical problems as the time passes by.

Needless to say, good planning must always rely on various in-depth long-term studies and applied research and on dependable statistics regarding population growth, the economically-active population, national accounts and so on. These could not be found in a country like South Vietnam which has been continuously at war for the last thirty years or so. As is well known, the economy of South Vietnam still remains underdeveloped and predominantly agricultural, and during the last three decades no surveys of any accuracy and details, be it on natural or human resources, and no applied research of any significance have ever been seriously planned, let alone being properly effected. This has been due not only to the war and the insecurity in the countryside but also to the lack of enlightened policies and commitment to long-term national development on the part of the political leaders. On the other hand, foreign aid, mainly American, have been uncertain because these depend on America's foreign policy and internal politics.

The economic planners thus have to face the serious problem of data gaps. Statistics, where and when available, are not reliable. Under these circumstances, any ambitious attempt at rational and comprehensive planning seems impractical and out of the way. Like the first and second five-year plans under the late President Ngo-dinh-Diem's administration, the present Four-Year National economic Development Plan, 1972-5, only serves to provide a guidance and a framework for various government departments and agencies, as well as private investors in their respective activities, to efficiently mobilize and put into effective use limited available resources to meet the urgent needs of national reconstruction and development. In other words, it only provides a basis for the continuation of more definitive studies, a foundation for the elaboration of operational programmes and projects, and a platform for the invitation of domestic and foreign investments as well as international financial assistance.

Political Constraints

The state of affairs as is mentioned above is quite understandable considering the political situation in South Vietnam during the last thirty years. As is well known to all, Vietnam (North and South) was under French domination since

1884 when, as a result of its military defeat, it was forced to accept a treaty recognizing French protectorate all over the country and French direct rule over Cochin-china (now southern Vietnam). Seventy years later, on 20 July 1954, the French themselves after having been defeated militarily at Dien-Bien-Phu, were compelled to sign the Geneva Agreements which brought the First Indochina War to an end and temporarily partitioned Vietnam into two separate states at the 17th parallel. With the emergence of a communist regime in the North, the United States backed the then Premier Ngo-dinh-Diem who replaced Emperor Bao Dai as Chief of State following a national referendum held on 23 October 1955. But no sooner had Ngo-dinh-Diem been installed in office than he had to quell the rioting of the rival religious political factions and to cope with the communist insurgency. Although the National Liberation Front of South Vietnam did not officially take shape until 20 December 1960, the guerrilla warfare had been renewed much earlier in 1957. From 1957 to 1963, the conflict was earnestly kept from becoming internationalized. But since late 1963, after the overthrow of the Ngo-dinh-Diem regime, the war has been steadily escalated and practically managed by the Americans. With the tactic of saturation bombing of both North and South Vietnam by the Americans since 1964 and the current offensive since early April 1972 by the communists, destruction has been wrought and prolonged sufferings of an unprecedented extent in the history of mankind caused to the two Vietnams. Turmoil has been on the increase consequently. Within nineteen months following the 1963 coup against Ngo-dinh-Diem, South Vietnam was under thirteen successive governments. And the internal political improvement since the promulgation of the new Constitution on 1 April 1967 has not, however, been matched with any military progress.

The political chaos has become worse than ever after the overthrow of President Ngo-dinh-Diem's government in late 1963 and the turning of the war into an increasingly nasty and brutish enterprise of killing and destruction. National development planning would not, therefore, avoid interruption and setbacks.

The attachment of the Central Planning Agency to the central government has also been switched from one ministry to another as a result of political instability and frequent Cabinet changes. Created in early 1955, the Directorate-General of Planning was first placed under the direct control of the President of the Republic, then switched to the Office of the Deputy Prime Minister in early 1965, then to the Office of the Commissioner for Planning and Development in late 1966, then to the Office of the Prime Minister in 1967, then to the Office of the Commissioner General for National Planning in 1968, then to the Office of the Assistant to the President in charge of National Development in 1969, and finally to the Minister of National Development and Planning since June 1971.[18] Its activities have thus been often disrupted.

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[18] Nguyen van Hanh, *Briefing on the Four Year National Economic Development Plan, op. cit.*, pp. 8-9.

The average life of each government varies from five to seven months; hence it prevents any planning efforts from taking effect. Moreover, the government has been too preoccupied with the war to be able to achieve anything positive. Most of national resources have been swallowed up by the omnivorous war machinery. Little has been left in terms of time, energy, material and human resources for national economic development. The national economy has thus drifted dangerously according to the turn of events and the fancies of individual ministers in successive governments. National survival depends upon American aid and is at the mercy of American foreign policies. Except for some expedient measures taken to temporarily stabilize the economy and slow down the inflationary pressures, no operational plans, even short-term ones, could be drawn up until early 1972.

Socio-cultural Limitations

South Vietnam is and will remain an agrarian society for a long time to come. In the past, over 80 per cent. of its population lived on farming. During the war years, many migrated to the urban areas and refugee centres where their safety has been better assured but where most of them have had a really hard time to earn a living. At the present time, although fighting is still raging in the countryside, the agricultural sector still has to somehow or other support no less than 70 per cent. of the total population. Like farmers in other countries in the developing world, South Vietnamese countrymen are far more conservative in their concept of life and economic ethic than city-folk. They are less prone to economic considerations and are usually more subjected to the influences of their neighbours. In their productive expenditures, they are more often guided by their financial facilities, i.e. by the previous harvests than by future profit prospects. Their economic decisions are more or less similar to those of a consumer rather than those of an industrial producer. In their daily activities, economic gains and profit motives seem to give way to social and cultural pressures.

The traditional system of a big family, with its strong vertical and horizontal solidarity among members of the same generation and/or of successive generations, however desirable it might be from the sociological and spiritual viewpoints, nevertheless presents a negative aspect of the economic behaviour of the majority of the South Vietnamese people. In many cases, it really constitutes a disincentive to hard work as it does not encourage economic independence and self-reliance but instead tends to dilute the worker's effort.

In spite of many dislocating changes brought about by many years of war, the South Vietnamese peasants still remain strongly attached to their native villages. These spiritual ties to their land, originating in the communalist spirit of the South Vietnamese peasants which has been handed down from generation to generation, prove to be unshaken even though, in many instances, their villages have been reduced to rubble by the heavy fighting during the recent years.

Culturally, South Vietnam still bears strong imprints of Taoism, Buddhism, and Confucianism. What this means in practice is that South Vietnam's traditional scale of social values used to be: *si, nong, cong, thuong* (scholar, farmer, craftsman, merchant). As a result, until recently business, technology, and material accumulation was looked down upon whereas there was great respect for literary studies and for diplomas.

Of course, after almost a century under colonialism, after thirty years of continuous war, and through frequent contacts with occidental people either directly or through the mass media, the situation has changed much now. The South Vietnamese, particularly the urban people, have nowadays become more pragmatic, more individualistic, more materialistic, and more economic- and development-minded. No longer is leisure advocated and people have come to fully realize the value of hard work. It is no less true, however, that one can still discern the lingering but persistent impacts of the socio-cultural factors mentioned above on the present society of South Vietnam as well as on the way of life of its people. As an illustration of these socio-cultural constraints, let me take some examples. Several months after the recent communist offensive was launched in early April 1972, the government tried to resettle most of the war refugees from the northern region of central Vietnam in some of the eastern provinces of southern Vietnam. But the crash programme did not achieve its objectives as many of these refugees decided to stay on in temporary refugee centres waiting for an end to the war to return to their native villages. What is more important is that they did so with the full understanding that if and when they could go 'home', they would have to restart their lives not just from scratch, but from a far more negative point considering the effects of the American programme of defoliation and tactic of saturation bombing, that the land in southern Vietnam where they were to be resettled was sparsely populated and much more fertile, and that they were going to receive substantial government grants to start a new life right away in the proposed resettlement centres.

The prevailing worship of diplomas and degrees constitutes another example. In this regard, many South Vietnamese are still obsessed by the desire to secure the highest diplomas and titles without paying due consideration as to what these may have to do with work in real life. There should be no surprise about this since scholars have always enjoyed high respect and social prestige in South Vietnam. And to many, high diplomas and degrees still represent talent and worth and remain instrumental in securing a place in the social ladder and in paving the way to other successes. Another illustration of the strong imprint of the traditional culture in the South Vietnamese society is the persistent discrimination against technical and professional education in the system of higher learning. Even now, these technical and professional institutions are not yet integrated into, nor raised to the same status with, other state universities. Obviously, the above socio-cultural considerations are not favourable to development planning efforts.

Administrative Obstacles

Under these circumstances, and as far as development planning is concerned, in

South Vietnam much is to be expected from its public administration. In highly developed countries in the West, this is often referred to as a necessary evil and, therefore, must be assigned minimal functions and relegated to a secondary position. For these affluent societies economics, and not public administration, plays the key role. On the contrary, public administration in South Vietnam, as well as in many other developing countries, has always assumed a decisive and leading function in every field of national activities as the private sector in these countries has not yet come of age nor has it lived up to its social responsibility. Therefore, it must, willy-nilly, constitute a 'leading sub-system' in the whole social system, i.e. assume a vital role in the process of national development and provide national leadership.[19]

This is particularly true in South Vietnam. As a direct result of its traditional culture, business and industries have long been neglected. Reflecting this imprint, its social structure presented a ruling upper class constituted by 'scholars' and a ruled lower class mainly formed by 'farmers', thus lacking a middle class which, in other countries, provides skilled manpower essential for all branches of economic activities. The French colonial authorities did nothing to fill this gap. In fact, on becoming independent after the Geneva Agreements, South Vietnam still found itself without that middle class, namely managers, technicians and experts in business, technology and science, which the country badly needed to modernize itself. Furthermore, the situation has got worse lately with the war which has resulted in a disastrous moral and intellectual decadence and widespread material destruction. The social fabric has been torn apart. The war has also made a big mockery of any effort to redress a poor and rotten society. Not only is there little financial and human resources left for reconstruction, development and social reforms, but the existing assets, in particular trained manpower, are depleted, crippled or destroyed as well. Hatred has been accumulated, whereas faith in the future – that most valuable of all assets – is shattered or seriously shaken.

On the other hand, under the influences of the 'revolution in rising expectations', people have come to realize that their conditions of living could be much more improved due to technological progress. Their expectations have not, however, been met thus far since the country has failed to increase its capacity to produce, and still lags well behind in terms of technology, business management and public administration. In addition, the traditional social framework dealing with various collective problems, such as the system of big families and villages and other social institutions, has become largely antiquated and is gradually cracking under the growing impact of Western civilization and the influence of a protracted and destructive war. There should, therefore, be no surprise that the South Vietnamese people now tend to rely upon the government to deal with all sorts of problems they have to face. And the role of public administration becomes more and more pervasive and important as a matter of course.

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[19] Nguyen-Quoc-Tri, 'Vaitro Hanh Chanh Trong Cong Cuoc Phat Trien', *Nghien Cuu Hanh Chanh* (Administrative Research), Vol. XV No. 2 (1972), pp. 276-97.

In practice, public administration in South Vietnam has never been neutral as in the West since its legal functions have never been confined solely to implement policies dictated by political leaders. It has constituted the only body that has the facilities, means and capabilities to formulate and implement national policies, plans and programmes in every sphere of social activities. In a sense, the executive and political powers in South Vietnam have always been a part of the public administration system. Whether or not it fulfills its assigned functions is another matter. In this regard, the South Vietnamese traditional system of education, especially of higher education, patterned on the Chinese traditional one and based on Confucian teachings, did produce good and able administrators as well as highly moral and motivated statesmen. These were the *chan nho* (real *literati*) – the true disciples of Confucius and Mencius – and the *quan-tu* (Chinese: *kun tsu*), i.e. men thoroughly trained in the ethics of politics who had passed stiff examinations of *cu nhan* (Chinese: *chu jen*) and *tien si* (Chinese: *tsin shi*) and were fit for high government positions. Such men could be relied upon to govern well, i.e. by radiating moral virtues, setting the right examples, and possessing deep love and concern for the welfare of the people, and thereby able to maintain social peace and political stability, the first being the basic condition of the second.[20]

But as is well known in South Vietnam, the *quan-tu* was the ideal. From ideal to reality, there is often a long way and the system, even when at its best, produced a great many *hu-nho* (reactionary or idiotic *literati*), i.e. men who were self-complacent, bookish, unimaginative, self-seeking, cowardly and corrupt. First introduced in the eleventh century under the Ly emperors when Vietnam became a full national state, the system was developed and refined by subsequent dynasties, including the last and now defunct one of Nguyen. Under the last three French-controlled emperors of this dynasty, namely Bong-Khanh (who ruled from 1885-8), Khai-Dinh (1916-25) and Bao-Dai (1932-45), it became corrupted and decadent and was named 'the mandarinal system', producing 'mandarins' for the Vietnamese court and agents of the French colonial administration.

The system was naturally found of great value by the French authorities in the process of consolidating their domination of the country. On this, Ton-That-Thien writes:

> Not only was the system maintained, but it was given a strong twist in the negative direction, i.e. with a view to producing mandarins of the worst kind and holding them up as the highest ideal for the Vietnamese society. . . Thus,

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[20] See Ton-That-Thien, 'Higher Education in a Transitional Country Plagued by Colonialism and War: the Case of South Vietnam' in Yip Yat Hoong, ed., *Development of Higher Education in Southeast Asia: Problems and Issues*, Singapore, RIHED, 1973.

the French colonial authorities, instead of pulling that society away from a worship of diplomas and purely literary studies and diverting the attention and energies of the Vietnamese towards sound economics and technology, in other words, towards producing the business and scientific leaders and experts the country badly needed to modernize itself, did much to perpetuate the system.[21]

The results of such a situation are known to all today: South Vietnam, on becoming independent in 1954, found itself without the honest, competent and efficient administration needed to lead its people into the paths of peace, stability and progress. It has been plagued, instead, by war and chaos for almost thirty years and no one can be sure when this tragedy is going to end.

On the other hand, in the socio-cultural context of South Vietnam, and after so many years under foreign domination and at war, the country badly needs reforms, modernization and reconstruction in every respect; hence, an efficient government is needed. But, although the National Institute of Administration was established as early as 1952, and from 1954 to 1970 it produced as many as 1,269 administrators,[22] public administration in South Vietnam still remains discouragingly inefficient and leaves much to be desired. The civil service is very much underpaid, and poorly organized in the sense that it lacks retirement provision for superannuated and/or inefficient personnel and a merit system of appointment and promotion. Its deficiencies, however, come mainly from the wrong conception of public administration as an instrument to maintain law and order, and to collect taxes and not as a science aimed at mobilizing human and material resources to achieve a certain desired objective. As a result, new theories on development administration and new techniques of management are not properly taught and put into effective use.

The combined effects of all the factors mentioned above have resulted in the failure of the government to acquire able development administrators, to improve development institutions, and to satisfactorily formulate and implement development programmes and projects; in a word, it has failed to meet the challenge of national development planning.

Infrastructure Constraints

Needless to say, the war is a disaster since it brings destruction to the whole nation. It leaves its indelible physical and moral scars on most families and on every aspect of the South Vietnamese society. Economically, the war has put a brake on the growth of the national economy; and the problems occasioned by war include such classical problems of a war economy as inflation, distortion of the pattern of public expenditures, a large number of refugees that have fled to the cities for security, and the disruption of agricultural production. Resources which would otherwise have been devoted to developmental projects have instead gone into the upkeep of a large army, aid to refugees, and the repair of damages caused by the war: and the country has become more and more dependent on foreign aid.

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[21] *Ibid.*

[22] National Institute of Statistics, Saigon, *Vietnam Statistical Yearbook, 1971*, p. 125.

As far as the infrastructure is concerned, the damages wrought on highways, railroads, inland waterways, airports, telecommunications, electric power and housing up to early 1969 were estimated at 30,410 million piastres by the Joint Development Group.[23] The fertility of some crop land has also been impaired as a result of the American tactics of saturation bombing and defoliation. If one travels around South Vietnam today, one will see signs of war damages everywhere.

The war, however, has had far more impact on the people than on the nation's long-term economic values;[24] and the legacies of the war are not all negative. While a large programme of rehabilitation and reconstruction of the infrastructure, both physical and human, will be required, the country will ironically inherit, as an offset, some economic strength in improved infrastructural facilities that will be quite outstanding for a poor country.

A large military construction programme has provided the country with a stock of some US$2 billion worth of transportation, communication and power facilities. In some sectors, ports and airports facilities developed by the military, when added to existing civil facilities, probably exceed immediate postwar requirements.[25] In fact, some fears have been voiced that these facilities may in some cases pose a strong temptation to keep more of them in use than could be economically justified, thereby squandering resources on unnecessary maintenance and distorting the pattern of investment in order to find a use for facilities just because they are there.[26] Of course, things still remain far from being satisfactory; and much still needs to be done in terms of statistical services, telephones, tape recorders, duplicators, calculators, computers, etc. to equip the country with a more adequate physical infrastructure.

On the other hand, a newly-trained labour force has also emerged from the years of the war. There can be no question that the labour force as a whole will be much more literate, better educated, more mobile, more highly-skilled and more suited to a variety of modern occupations than the largely agricultural labour force of the days before the war. This comes partly from the war-related activities of the private, and in particular the American sector, but mainly from military training. During the war years, many soldiers have improved their literacy, learned to follow precise instructions, and acquired a variety of modern skills such as map-reading, the operation and repair of transportation and construction equipment, etc. which will maximize their future productivity in the civilian economy after demobilization. In this regard, Emile Benoit has this to say:

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[23] *The Postwar Development of the Republic of Vietnam, op. cit.*, Vol. II, pp. 348-9.

[24] Benoit, *Southeast Asia's Economy in the 1970's, op. cit.*, p. 706.

[25] *The Postwar Development of the Republic of Vietnam, op. cit.*, Vol. II, p. 347.

[26] Benoit, *Southeast Asia's Economy in the 1970's, op. cit.*, p. 706.

> . . . this aspect of military training can be greatly strengthened if viewed as a major positive objective, secondary perhaps to the acquisition of purely military skills, but of great independent importance, and validly claiming a substantial share of the attention and energies of the defence programme. Since the larger part of the force will presumably return to agriculture after demobilization, there may be great potentialities in training them while in military service to undertake important leadership functions after demobilization in agricultural extension and village development work. Making available farms and homes on easy terms to demobilized servicemen in outlying militarily exposed areas, and using such people both for agricultural demonstration work and to lead Popular Force or PSDF [People's Self-defence Force] contingents, might provide the best possible use for their combination of military, agricultural and leadership skills gained in military service. To those soldiers planning to live in urban areas, clerical, mechanical, and business training might also be given during their term of military training.[27]

To improve the human infrastructure, efforts must also be made to form a strong middle class whose importance can never be overemphasized. The national educational system will therefore be expected to train more people with modern skills and leadership capability, especially in the fields of planning, budgeting, programming, work evaluation and modern administration to meet the needs for high and middle-level skills in various spheres of activities. Outstanding students and government personnel should be sent abroad for further serious study, training and work experience both as an incentive and as an invaluable adjunct to personnel development plans. In view of the present acute shortage of technicians, provision should also be made to supplement existing South Vietnamese personnel with strictly essential foreign experts on a transitional basis until adequate South Vietnamese replacements could be properly trained. This really constitutes one of the many challenges that, in the process of national development planning, the South Vietnamese system of higher education will have to face in the coming years.

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[27] *Ibid.*, p. 722.

SECTION IV

ROLE OF THE UNIVERSITY

Brief Description of Higher Education Development in South Vietnam

Historically, higher education in South Vietnam could be traced back to the dynasty of Ly in the eleventh century when the Van-Mieu (Temple of Literature) and the Quoc-Tu-Giam (National College) were established. At the time, it was patterned on the Chinese traditional system, and essentially based on Confucian teachings. It produced a breed of men obsessed by the desire to secure the highest diplomas to prove their talent and worth. Deficient even when at its best since it totally neglected business, economics and technology, the system became perverted in the decadent phases of the imperial dynasties, particularly of the last three French-controlled Nguyen emperors mentioned earlier. For one reason or another, the system was, however, perpetuated by the French colonial authorities until 1918 when its last triennal examination was held.

One year before that, the first French university was started in Hanoi. To be accurate, its establishment actually dated back to 1907. However, being little more than a vocational school at the start, it was formally inaugurated only in 1917 under the name of University of Indochina. It was not, one might say, a real university since it consisted of seven schools whose aim was to train technicians (*agents techniques*), i.e. field agents or middle-echelon officials who would receive diplomas or certificates instead of degrees. With the exception of the School of Commerce which was located in Saigon, the six other schools, namely Medicine and Pharmacy, Law and Administration, Veterinary Sciences, Teachers' Training (Education), Agriculture and Forestry, and Public Works, were all located in Hanoi. A School of Fine Arts and a School of Science were added in 1924 and 1941 respectively. For many years, the number of students was very small: 430 in 1917, 395 in 1925, 552 in 1930, 834 in 1941-2, 1,000 in 1942-3, and, at its highest, 1,222 in 1943-4. Medicine, pharmacy, law and sciences were preferred to the technical and economic subjects, especially after 1940, when the technical school were separated from the university. For instance, in 1941-2, there were 834 students enrolled in the three faculties of Medicine and Pharmacy, Law and Science as against 201 in all the technical schools.[29]

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[28] For further details, see Nguyen Truong, 'Higher Education in Vietnam: Consolidation *versus* Expansion' and Ton-That-Thien, 'Higher Education in a Transitional Country Plagued by Colonialism and War', *op. cit.*, in Yip, *Development of Higher Education in Southeast Asia, op. cit.*, and 'Relations Between the Regional and National/Metropolitan University' in Yip Yat Hoong, ed., *Roles of Universities in Local and Regional Development in Southeast Asia.* Singapore, RIHED, 1973.

[29] Doan-Viet-Hoat, *'The Development of Modern Higher Education in Vietnam: a Focus on Cultural and Socio-Political Forces'*, Ph.D. thesis, College of Education, Florida State University, 1971, pp. 101-3.

It should also be noted that the University was 'Indo-chinese' only in name. It was, in fact, little more than an overseas French university. Not only was it directly attached to, and its doctoral degree conferred by, the Academy of Paris, but until 1948 there was no Vietnamese professor on its teaching staff, and until 1955 French still remained the medium of instruction. In a word, it was primarily designed to train local subordinate cadres needed to help administer and support the colonial government along the lines of the colonial power; hence the University was completely geared to the interests of France and had little relation to the needs for modernization of the Vietnamese society. In 1949, as a concession on the part of the French, it became the University of Hanoi. Nothing much, however, was changed except the name of the University. On 30 December 1949, the French government imposed on Bao Dai a Cultural Convention whereby the University became a Franco-Vietnamese University with centres both in Saigon and Hanoi, and with a mixed French-Vietnamese Governing Board in which the French naturally dominated.

This situation persisted until 1954 when, as a result of the Geneva Agreements, the entire University was reconstituted in Saigon under the name of National University of Vietnam. Two years later, it was changed again to University of Saigon when a second university – University of Hue – was opened at the former imperial city in central Vietnam. Since then, a number of new universities has emerged, and by the end of 1972 there were eight universities, three state and five private. Apart from the two state universities mentioned above, these are, in chronological order, University of Dalat (private and founded in 1958 under Catholic sponsorship), Van-Hanh University (private, 1964, Buddhist sponsorship), University of Can Tho (state, 1966), Hoa Hao University in Long Xuyen (private, 1970, Hoa Hao sponsorship),[30] Minh-Duc University (private, 1970), and Cao Dai University in Tay Ninh (private, 1971, Cao Dai sponsorship).[31] Besides the universities, there are, at present, four technical and professional institutions of higher learning, namely the Oceanographic Institute (1933), the National Institute of Administration (1952), the National Technical Centre (1957), and the National Agricultural Centre (1959). One might be tempted to include the normal schools, whose aim is to train elementary teachers, in higher education as well. For the time being, these normal schools, whose enrolment in 1970-1 totalled 6,407 (of which 3,750 were first-year students and 2,657 second-year students), are not yet considered as being parallel to the universities, perhaps, because they accept students who have completed only the eleventh grade and passed the Baccalaureate I examination although this programme is for two years and goes into the thirteenth year.

Except for the normal schools which require only the Baccalaureate I certificate (end of the eleventh grade test), all other institutions of higher learning would only admit those who hold a Baccalaureate II Diploma (which is obtained by passing the examination after the twelfth grade). Moreover, only the Faculties of Law, Letters, and Sciences in the three public universities, and some of the programmes of the private universities are open to all Baccalaureate II certificate holders. Other institutions, including some of the university faculties, require an admission test and select only a number of students appropriate to their facilities. However, with the increase in secondary school graduates, the institutions of higher education, in particular, the open-enrolment faculties, have been feeling greater and greater enrolment pressures (see Tables IV.1, IV.2 and IV.3). In 1971-2, the total enrolment in these institutions (not including the normal schools, the Cao Dai University, and the National Institute of Administration) rose to 70,062 from 4,985 in 1957-8.

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[30] Hoa Hao is a Buddhist sect.

[31] Cao Dai is also a religion with a strong predominance of Buddhism, but admits into its pantheon many other gods and great men (Jesus, Victor Hugo, etc.).

In view of the above-mentioned expansion in terms of institutions and enrolment and the limitations imposed by physical and human resources, there should be no surprise at the deterioration of the quality of university education in South Vietnam and its failure to produce graduates able to adapt themselves to the fast changing times. It is true that since 1954 efforts have been deployed to improve the situation. Among other things, South Vietnamese professors have gradually replaced French professors in the teaching staff, Vietnamese language has replaced French as the medium of instruction, but little seems to have changed with regard to the university curricula. In this regard, the weaknesses and shortcomings of the colonial system persisted not only throughout the 1950's and 1960's but even today, and tend to prolong into the future. The evils have further been compounded by a number of other inhibitive factors: the neglect of the government, the war, and the weight of American influence.[32] Thus, the main problems faced by the university leaders remain the same, but to a more serious degree: the anachronistic structure which is still patterned after the French faculty system, the classical philosophy of education (theory, erudition), the curriculum which is little more than the one set up in French colonial times and now influenced by the curricula of American universities, the poor teaching-learning methods (lecture, rote-memory and repetition-oriented); the severe lack of instructional materials, and the extreme scarcity of qualified professors (see Table IV.4).

Obviously such a system of higher education is far from being relevant to the needs of the country which is now undergoing a process of rapid economic, social and cultural changes. This is best illustrated by the fact that the number of students in the technical and professional institutes remained at a pitiful figure of 1,331 out of a total university enrolment of 70,062 in 1971-2. As a result, the country had to import thousands of foreign experts (30,000 of all kinds)

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[32] See Ton-That-Thien 'Higher Education in A Transitional Country Plagued by Colonialism and War', *op. cit.*

Table IV.1

Participation and Success in High-School Examinations in South Vietnam, 1957-71

Bac. II (Second Baccalaureate Exam)				Bac. I (First Baccalaureate Exam)			
*Year**	*Number tested*	*Number passed*	*Percentage of passes*	*Year**	*Number tested*	*Number passed*	*Percentage of passes*
1971	31,490	16,827	53.4	1971	95,475	34,630	36.3
1970	21,733	13,485	62.0	1970	75,120	28,366	37.8
1969	27,570	10,804	39.2	1969	62,616	13,980	22.3
1968	29,913	11,600	38.8	1968	65,934	27,280	41.4
1967	20,535	6,673	32.5	1967	51,217	16,155	31.5
1966	28,763	12,659	44.0	1966	40,928	14,622	35.7
1965	26,043	5,071	19.5	1965	60,805	13,648	22.4
1964	30,475	5,574	13.3	1964	71,535	8,939	12.5
1963	21,077	5,519	26.2	1963	54,191	13,706	25.3
1962	16,263	4,545	27.9	1962	52,631	10,725	20.4
1961	13,215	4,082	30.9	1961	35,001	7,527	21.5
1960	8,321	2,213	26.6	1960	31,031	5,765	18.6
1959	3,369	1,798	53.4	1959	11,589	3,227	27.8
1958	2,052	1,037	50.5	1958	7,234	2,661	36.8
1957	2,135	764	35.8	1957	8,844	1,685	19.1

Source: USAID/Higher Education, Saigon, 1972.

*Testing was done in the summer of the year shown; thus, '1970' for example indicates the end of the school-year 1969/70.

Table IV.2

University Enrolment, 1957-72

Academic Year	*Saigon*	*Hue*	*Can Tho*	*Van Hanh*	*Dalat*	*Total*
1957/58	4,315	670				4,985
1958/59	6,288	752			49	7,089
1959/60	8,400	1,141			187	9,728
1960/61	10,143	1,421			316	11,880
1961/62	12,616	2,267			426	15,309
1962/63	14,761	2,488			459	17,708
1963/64	16,964	3,272			444	20,680
1964/65	19,032	3,561		696	115	24,804
1965/66	22,619	3,099		485	1,382	27,585
1966/67	26,556	3,314	974	805	1,660	33,309
1967/68	26,730	3,453	1,396	1,813	2,453	35,845
1968/69	30,476	3,214	2,012	2,796	2,664	41,162
1969/70	34,552	3,359	2,694	3,210	2,498	46,313
1970/71	40,351	3,112	3,528	3,950	3,496	57,508
1971/72	50,380	4,256	4,227	3,346	3,700	70,062*

Source: USAID/Higher Education, Saigon, 1972.

*This total includes the National Technical Centre (741), the National Agricultural Centre (590) and the two new universities, Minh Duc (1,022) and Hoa Hao (1,800).

Table IV.3

University Enrolment, 1971/72

Faculty	*Saigon*	*Hue*	*Can Tho*	*Van Hanh*	*Dalat*	*Minh Duc*	*Hoa Hao*	*NTC*	*NAC*
Letters	17,169	1,061	1,027	559	900*		n.a.		
Law	17,838	1,346	1,337						
Science	9,884	758	876		700*	n.a.			
Pedagogy	1,689	775	774	630	400*		n.a.		
Medicine	1,257	316				n.a.			
Dentistry	208								
Pharmacy	1,740								
Architecture	595								
Agriculture			213			n.a.			
Political Sci. & Bus. Adm.				1,623	1,700*				
Philosophy						n.a.			
Commerce & Banking							n.a.		
International Rel. & Man.							n.a.		
Language Centre				402			n.a.		
Buddhist Studies				132					
Hoa Hao Studies							n.a.		
Chemical Engineering								133	
Civil Engineering								198	
Topographical Engineering								57	
Electrical Engineering								121	
Electronic Engineering								38	
Mechanical Engineering								194	
Agriculture									307
Animal Husbandry									155
Forestry									128
TOTAL	50,380	4,256	4,227	3,346	3,700*	1,022*	1,800*	741	590

Source: USAID/Higher Education, Saigon, 1972.
*Estimated.
n.a. = not available.

Table IV.4

University Enrolment and Teaching Staff, 1957-71

Academic Year	*University enrolment*	*Teaching Staff* *Male*	*Female*	*Total*	*Ratio of Teacher: Student*
1959/60	9,728	368	26	394	1:405
1960/61	12,879	792	70	862	1:669
1961/62	15,309	448	46	494	1:323
1962/63	17,708	462	55	517	1:292
1963/64	20,770	521	74	595	1:286
1964/65	24,804	418	73	491	1:198
1965/66	27,585	528	77	605	1:219
1966/67	33,310	650	91	741	1:222
1967/68	35,845	616	87	703	1:195
1968/69	41,269	794	131	925	1:224
1969/70	46,507	921	173	1,094	1:235
1970/71	57,508	n.a.	n.a.	n.a.	–

Source: Vietnam Statistical Yearbook, 1971.
n.a. = not available.

under the USAID programme between 1965 and 1968 for the implementation of various technical projects.

Role and Purpose of Higher Education

As mentioned earlier, in South Vietnam as far as higher education is concerned, little seems to have changed since its independence in 1954, and little will probably change in the near future unless drastic measures could somehow be taken to stop the existing trend and change the system into a new and right direction. The country has inherited from the French colonial authorities a system of higher education which has little relevance to the South Vietnamese way of life and its social and economic realities. Too concerned with matters of security since its very beginning, the government has also failed to pay proper attention to the needs of the university to make it more appropriate to the requirements of the new era. Under political and religious pressures, new universities have been opened to meet social demand with little consideration for manpower needs and without due regard to various pre-conditions for their successful operation. Neither have the goals, aims, objectives, role and purpose of higher education ever been clearly delineated and defined.

In fact, the National Convention of Education held in 1958 did lay down three basic principles which, according to the Ministry of Education,[33] have served as the three mainstays of its policy. Following these principles, namely humanism, nationalism and cosmopolitanism, education should:

(1) Respect the sacred values of man, consider him as an end *per se* and aim at the full development of the individual (humanism);

(2) Respect the national traditional values, assure the continuity of the vital natural environment for man (i.e. his family, his profession and his country) and aim at safeguarding the nation as well as its prosperity and the progress of its people (nationalism); and

(3) Keep up the scientific spirit as a factor of progress, develop the sense of social and democratic responsibilities and welcome genuine cultural values from all other countries (cosmopolitanism).

These principles were further strengthened by the National Convention of Education of 1964 which stressed the need for initiating necessary reforms with a view to improving the educational system and formulating a programme appropriate to national development. It was then recommended that educational development be geared to the four following objectives:

(1) To create a propitious environment and favourable conditions for every citizen to fully develop his capabilities according to his own aspirations and

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[33] Ministère de l'Education, Républic du Vietnam, *Rapport sur le dévelopment de l'éducation au Vietnam pendant la décennie 1960-70,* Troisième conférence des Ministres de l'Education et des Ministres responsables de la Planification économique en Asia, Singapour, 31 Mai – 7 Juin 1971, pp. 6-7.

means;
(2) To train responsible and really capable cadres at all levels needed for a balanced and harmonious development of the nation;
(3) To develop the national culture and welcome genuine cultural values from all over the world; and
(4) To improve technical and professional education with a view to raising the standard of living of the people.

The ultimate purpose is thus to achieve an educational system which would offer equal access to all citizens and at the same time meet the real needs of national development and prepare every citizen to better adapt himself to his environment and to improve his standard of living.

These principles and objectives were later confirmed by the Constitution of 1 April 1967. Its two articles 10 and 11 read:

Article 10:
(1) The State recognizes freedom of education.
(2) Basic education is compulsory and free of charge.
(3) University education is autonomous.
(4) Talented persons who do not have means will be given support to continue their studies.
(5) The State encourages and supports research and creative work by citizens in the fields of science, letters and the arts.

Article 11:
(1) Culture and education must be considered matters of national policy on a national, scientific, and humanistic basis.
(2) An appropriate budget must be reserved for the development of culture and education.

Naturally one should not expect the recommendation of the National Convention of Education and the Constitution to be specific on this matter. These statements of principles, by definition, are often so general and vague that they could, so to speak, mean everything and at the same time nothing. No one will perhaps want to quarrel over this. But before the institutions of higher education are expected to become truly responsive to national needs, their role and purpose ought to be clearly determined and delineated so that they could adapt thier programmes to achieve the goals set. In other words, the recommendations and constitutional provisions mentioned above must somehow be put into effect. They must, therefore, be translated into institutional structure, plans and programmes of training and research, curricula, teaching and learning methods, etc. The university must foster an unfettered pursuit and dissemination of knowledge and truth. For that, it must enjoy a high degree of academic freedom. But as a social institution, it must use its freedom to serve the society, i.e. to contribute to the social and economic development of the nation. Legislation is thus needed to regulate its right and couple it with a corresponding responsibility, in other words, to clearly define with a high degree of specificity the authority of the university administration and its public accountability.

Unfortunately, in this regard, up till now, apart from the general stipulations in the two articles 10 and 11 of the Constitution, there have been no specific legal texts whatsoever in evidence. A solid and progressive legal base is still lacking although the need for such a legal base has long been felt by the university authorities. At present, the university operates on the basis of a patchwork of provisions from the statutes for the University of Hanoi, customs, and disparate executive decrees and regulations are issued when specific needs arise. To remedy this situation, efforts have been deployed by the university authorities and the Ministry of Education in the last several years toward a law providing a National Charter for higher education. After having been stalemated for more than once the process has been given renewed interest and efforts in recent months. A draft bill has thus been worked out whereby higher education will be assigned the following role and purpose:

(1) To enrich the national culture;
(2) To train cadres and technicians for all spheres of national activities;
(3) To foster the pursuit and dissemination of technical and scientific knowledge; and
(4) To assure continuing national progress.

In addition to the determination of the role and purpose of the university, the draft bill has also dealt with the definition of higher education, academic freedom, and the autonomous budget of the university, and has proposed the creation of a National Council for Higher Education Development. The latter will be vested with the duties: (i) To chart overall policies and plans for university development; (ii) To review and promulgate university statutes; and (iii) To determine annual financing for the universities.

Considering the importance of the National Charter for higher education, it is hoped that differences of opinion will be ironed out this time and that the draft bill will be soon finalized and get the legislative backing for an early enactment to provide the university system with a badly needed and workable legal framework.

Coordination of Higher Education Planning with National Economic Planning

It has been noted earlier in this study that up till now economic planning in South Vietnam has been very tentative in approach and very indicative in nature, that the planning process, due to the military upheavals of the war and the ensuing political disturbances, was disrupted for the whole period between 1963 and 1972, and that the current Four-year National Economic Development Plan, 1972-5, like the first and second five-year plans, only gathered a number of descriptive and roughly estimated programmes and projects the implementation of which will not be easily achieved during the period of the plan.

It has also been pointed out that no plan has ever been drawn with regard to the development of higher education whose quantitative expansion is merely the result of the interplay of a variety of factors, mainly of social demand and political religious pressures. This has resulted in a wide range of problems in which quantitative and qualitative factors are intrinsically linked. On the one hand, the rising expectation for education of a fast growing population, the democratization of education, and the ever-increasing needs for manpower at professional and sub-professional levels have exerted irresistible pressures on the university to expand. On the other, this rapid quantitative growth, which has been taking place in the face of serious constraints caused by the current paucity of material and human resources and the war, would not have been possible without further impairing the quality of education. Intermittent efforts to improve the situation have been neutralized by the inertia of the system itself with its antiquated structure, contents and methods, as well as by that of the society at large which is still imbued with the lingering traditional system of social values and prejudices.

Under these circumstances, the question to be asked is not how higher education planning is coordinated with national economic development planning but when is it possible for higher education planning to start in South Vietnam. Any attempt at higher education planning would undoubtedly have to strike a balance between the social demand, the rational manpower requirements and the type of university system existing. The combination of these three factors which are usually considered by educational planners in other countries would lead to meaningful planning in South Vietnam only if the national philosophy of university education is determined and known, and only if sufficient reliable data and statistics regarding the total population, the economically-active population, the population by sex and by age-groups, its growth rate, the projection of these figures into the years to come, and most important, the national quantitative needs for various types of high-level human resources are available. For planning to take place, there should be a close relationship between the institutions of higher education and the government as well as development agencies but this relationship is regrettably lacking now in South Vietnam.

The total lack of higher education planning is reflected in its utter irrelevance to the national development needs and in the current educational crisis. Quantitatively, the system has grown very fast. In 1971-2, the total enrolment reached 70,062 compared to 2,442 in 1954-5. Before the Second World War, no universities existed in South Vietnam but now, apart from the National Agricultural Centre, the National Technical Centre, the National Institute of Administration, and the Oceanographic Institute, there are three state universities and five private ones. It is also expected that some other private universities will be established shortly. This growth in number will lead to more problems. If the Harbison and Meyers composite index (which is based on seven different human-resource indicators relating to the numbers of teachers, engineers and scientists, doctors and dentists, pupils and students of all levels and all fields of studies)[34] is to be used,

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[34] Do-Ba-Khe, 'Giao-Duc va Tinh-Trang Khoa-Hoc, Ky-Thuat tai VietNam Cong-Hoa', Unpublished working paper prepared for the Ministry of Education, South Vietnam, p. 7.

South Vietnam could at best be ranked somewhere between the underdeveloped and the partially developed countries. There should be no surprise at this since the current human resource (the number of teachers, engineers and scientists, doctors and dentists) remains scant, and its potential weak. For the whole period from 1954 to 1970, the system of higher education only produced a total of 601 teachers of lower secondary education, 1,006 teachers of upper secondary education, 1,337 doctors, 217 dentists, 1,092 administrators, 399 civil engineers, 206 electrical engineers, and 211 engineers of industrial arts.[35] According to Do-Ba-Khe, it was estimated that within the first five years of the post-war period, South Vietnam would require the services of some 4,896 engineers in addition to the present stock of about 1,000;[36] and on the basis of the ratio of professional to sub-professional of 1:5, some 24,480 additional technicians will also be needed. Thus, the system of higher education in South Vietnam would have to have the capacity to train 979 engineers and 4,896 technicians yearly if the above targets were to be achieved. In fact, in 1971 only 117 engineers and 156 technicians graduated from the National Technical Centre and only 90 engineers from the National Agricultural Centre and the Agricultural College of the University of Can Tho. The shortage is therefore very acute, in particular with regard to sub-professional manpower. Meanwhile, in 1971-2 only 1,331 students were admitted into technical and agricultural education as against a total enrolment of 70,026 at the tertiary level. These statistics will speak for themselves, and will surely give us an idea about the degree of irrelevance of the higher educational institutions of South Vietnam to the modernization needs of the country. The imbalance of the present system which originates from the undesirable distribution of enrolment is further aggravated by its archaic content and classical philosophy of education. The system therefore reflects only the social demand of the country, not the manpower requirements of the economy.

At present, according to the Four-Year National Economic Development Plan, 1972-5, the following targets are set for 1974-5:[37]

(1) The total enrolment in tertiary education would reach 146,000 or 0.7 per cent. of the total population (see Table IV.5);

(2) Of this figure of 146,000, the public institutions would account for 121,000; and

(3) 2,470 out of 121,000 students in public institutions would be geared to technical and agricultural education (see Table IV.6).

Since there are no reliable censuses, surveys, studies or projections on population and manpower requirements available, the above-mentioned targets must have been based on opinions rather than on facts. The case for better surveys and studies on these matters is therefore clear. And obviously, efforts must be de-

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[35] National Institute of Statistics, *Vietnam Statistical Year book, 1971, op. cit.*, pp. 125-6.

[36] Do-Ba-Khe, *op. cit.*, pp. 7-8.

[37] Tong Nha ke-Hoach, *Ke-Hoach Bon Nam Phat-Trien Kinh-Te Quoc-Gia, op. cit.*, p. X.10.

Table IV.5

Total Enrolment from 1972/73 to 1974/75
(In thousand students)

	1971/72	*1972/73*	*1973/74*	*1974/75*	*Rate of increase (%)*
Primary education	2,917	3,110	3,354	3,586	22.9
Secondary education	861	935	1,062	1,207	40.2
Tertiary education	70	83	108	146	108.6

Source: Directorate-General of Planning.

Table IV.6

Enrolment and Rate of Increase in Public
Institutions of Higher Education

	1971/72	*1974/75*	*Rate of increase (%)*
State universities	58,930	118,500	101.1
Technical education	735	1,200	59.4
Agricultural education	821	1,270	54.7

Source: Directorate-General of Planning.

ployed to start higher education planning and to improve national development planning so as to provide proper guidance to the university. For the success of this enterprise, ways and means must be earnestly sought to increase the cooperation between the university and the government.

Survey of University Resources Available for Development Planning Purposes
Training, research and consultation represent three main areas in which the university in every country is expected to contribute to national development planning. It is obvious from the previous sections of this study that university resources in these three spheres of activities are extremely limited in South Vietnam. The acute shortage of qualified professors is the most important, but not the only constraint. The obsolete content of the vestigial education from colonial times and the poor teaching and learning methods, among many other inhibitive limitations, also make university graduates inappropriate to the national needs for modernization.

For various reasons which were fully explored by the participants at the workshop held by the Regional Institute of Higher Education and Development in Singapore from 26 to 19 July 1971,[38] in South Vietnam as well as in its neighbouring countries, little consideration has been given by the university to research and consultation. Accordingly, teaching constitutes almost the exclusive function of all institutions of higher education. But quality still proves to be the main problem for these institutions. In large part, higher educational programmes remain very theoretical and based on the erudition-oriented and classical philosophy of education. The curricula have little relevance to the South Vietnamese way of life, value system, and overall cultural pattern, as well as to the social and economic realities of the country. Humanities and arts have absorbed too much room and too great a share of the current scarce resources at the expanse of applied sciences and technical and professional education. Development administration, economics, business administration, mathematical and statistical techniques, and foreign languages have not been given the proper weight they deserve. This deficiency in higher education has resulted not only in the imbalanced and unhealthy distribution of enrolment among different institutions and disciplines (see Table IV.3), but also in the current shortage of skilled manpower at professional and sub-professional levels as mentioned earlier.

The methodology and spirit are obsolete. No good textbooks in Vietnamese can be found. The command of foreign languages, namely French and English, has been deteriorating in recent years and there is a severe lack of instructional materials. All these factors have forced both teachers and students to rely primarily on the lecture and on rote-memory method whereby the professor usually gives his lecture at dictation speed, the student takes notes and then tries to memorize these so as to be able to recite them back at the year-end examinations. The quality of learning thus becomes to a great extent dependent upon, and drastically limited by, the quality of the lecture notes which in most cases are hopelessly out of date and irrelevant in the modern world. As a result, although the rigorous evaluation system and the selective admission policies of some institutions[39] eliminate, for the most part, all but the most alert of the students, university graduates in South Vietnam often do not have the same educational experiences and achievement as their counterparts in industrial countries. In other words, neither do they have the thorough grounding in modern quantitative techniques nor the background of technical and professional expertise badly needed for national development.

The quality of learning, however, is decisively conditioned by the strength, both qualitative and quantitative, of the teaching staff. In this respect, as has been mentioned earlier, the major staffing problem manifests itself in the extreme scarcity of qualified professors. This has resulted in the dangerously low staff-student ratios (see Table IV.4 above), particularly in the public institutions with open-enrolment policies. The situation looks still more depressing from the qualitative viewpoint. A large proportion of the teaching staff is part-time and below the doctoral level (see Table IV.7). The few professors who are there teach in more than one institution. For one reason or another, most of them live in Saigon, then commute to Can Tho, Dalat or Hue to give their courses in a short-intensive series of lectures. Classes become often over-crowded and unmanageable. Library facilities are very limited. Laboratories often have to operate on many shifts per day to permit students to do their compulsory laboratory work. In most cases, the teacher cannot control the regular attendance of his students, let alone guide and counsel them through their studies. Needless to say, this state of affairs has greatly impaired the quality of higher education.

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[38] Yip, *Role of Universities in National Development Planning in Southeast Asia*, *op.cit.*

[39] Nguyen Truong, 'Higher Education in Vietnam', *op. cit.*

Apart from teaching, research also constitutes another important function of the university. Of course, good research fosters good scholarship and the inquiry method is one of the best for the teaching-learning situation. But most important, by conducting research on matters that are vitally required for national progress (for instance, on the interaction between population growth, economic development, and socio-cultural changes), the university can, not only promote the consistency between the knowledge it pursues and disseminates and what has been happening in its environment to the students' benefit, but can also play an active part in the process of national development. In South Vietnam thus far, no research of such a nature has taken place within the higher-education system. There are many reasons to this: research funds and facilities are not available, the present structure of the university system is too rigid to nurture any joint research between different faculties and universities, the jealous separation between pure-science education and applied-science, technical and professional education, no research incentives, difficult access to governmental information, particularly to classified ones, and the government often prefers foreign researchers on contract to local academics. But the most important reason is perhaps the human factor. Due to heavy teaching loads, administrative responsibilities, low salaries and hence the need for 'moonlighting', the few professors who really have the expertise and experience have no time left for doing research. In a working paper on university reforms in South Vietnam, Charles B. Green of the Higher Education Division, USAID, Saigon, maintained that research could be productive at various levels.[40] Not only research done by top-level theoreticians, but also the simple research solutions to national problems. Given the poor quality of higher education and the present educational achievements and experience of South Vietnamese students, one has strong reasons, however, to doubt that their research, if any, could be of much help to the developmental needs of the country. Taking a quick glance at the few studies and dissertations submitted to various

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[40] Charles B. Green, *'A Working Paper on University Reforms in Vietnam'* (unpublished), USAID, Saigon, Higher Education Division. June 1972, pp. 16-17.

Table IV.7

University Teaching Staff by Category, 1969-70

		Doctoral level and above		*Below doctoral level*		
	Total	*Professors (full, associate, assistant)*	*Lecturers*	*Assistant chiefs*	*Assistants*	*Others*
Total	1,094	315	152	63	144	420
Law	65	20	9	1	6	29
Letters	270	66	98	6	8	92
Pedagogy	128	23	3	8	9	85
Medicine and Dentistry	219	31	22		58	108
Pharmacy	28	12	5	1	9	1
Sciences	302	81	15	47	54	105
Architecture, Political Sciences and Management	82	82				

Source: Compiled from *Statistical Yearbook, 1970, op. cit.*, p. 119.

faculties by graduate students, one will note with regret that the students had not been properly guided in their research and that most of the research topics laid stress on theoretical aspects and hence had very little to do with actual development problems in the country.

What has been said so far in connection with research also applies to consultation. And in view of the present situation in the higher education system in South Vietnam, one cannot avoid the conclusion that university resources available for development planning remain pitifully limited. The prospect would, however, be much brighter if the many well-trained South Vietnamese who are now residing in foreign countries could be persuaded to return in the year following the war.

Extent of Current University Involvement in National Development Planning

It is generally agreed that there is a positive correlation between the quality of the higher educational system and the progress of a nation. The great majority of those in power, whether they be in the public or in the private sector, whether they be national leaders, legislators, politicians or doctors, teachers, engineers, economists, scientists or business executives, are the products of universities and their laboratories. The university thus constitutes the greatest force in shaping the life of a nation and at the same time the most endurable of all of the constantly changing forces.

South Vietnam is no exception, and probably no one would deny that the universities there could and should play an active role in the social and economic development of the country. But in reality, the contribution of the universities in South Vietnam to national development planning, at this juncture, still remains insignificant, and there is an obvious lack of cooperation between the higher educational system and the government in this respect. This has been widely recognized as a fact not only by university authorities but by the government as well. A seminar held in Saigon from 23 to 25 November 1972 on the 'Role of Universities in National Development Planning in Vietnam' also led to a general confirmation of this deficiency which stems not only from the many weaknesses of the higher education system but also from the government's faults.

To be fair, it must be noted that after the Geneva Agreements in 1954, the government did strive to improve the university just taken over from the French. In the first stage, attention concentrated on the Vietnamization of the system. As a result, Vietnamese professors gradually replaced French professors on the teaching staff and Vietnamese was gradually being used to replace French as the medium of instruction. In the second stage, efforts were deployed to expand the system and relate it to the needs of the nation. Thus, apart from the newly-reconstituted University of Saigon, the universities of Hue and Can Tho, the National Technical Centre, and the Agricultural National Centre were successively created, and the National Institute of Administration strengthened. These new institutions were expected both to meet the growing social demand for higher education as well as to provide the government with a new breed of administrators and other spheres of national activities with needed technical cadres. At this point, one important defect must, however, be pointed out: the hasty expansion mentioned above took place in the absence of any solid legal base, and without proper planning. A National University Charter or even an established national policy for higher education is still lacking. Neither a National Master Plan nor an operational plan has ever existed. As a result, the system fails to live up to national expectations. The universities have trained more degree-holding and erudition-minded intellectuals than the more needed specialists and technical cadres essential for national development. And at present, many graduates are reported to be jobless in spite of the fact that there is an acute shortage of skilled manpower both at professional and sub-professional levels in the many fields of national life.

With regard to research and consultation, the current relationships between the universities and the government continue to be of a personal and *ad hoc* nature. In a key speech on the existing relationships between the government and the universities in national development planning, delivered on 23 November 1972 at the seminar referred to above, Le-Tuan-Anh, the current Minister of National Development and Planning, confirmed that in the process of development planning in South Vietnam, the government has since 1957 secured the services of many university professors in the formulation of development plans, but this has been only on an individual basis. The cooperation between the government and the universities still leaves much to be desired. For instance, co-ordination somehow exists, loosely of course, between the National Agricultural Centre and the Ministry of Land Reform, Agriculture and Fishery Development, and between the National Technical Centre and the National Institute of Administration and various government ministries and agencies. But these relationships are unofficial and of an *ad hoc* character.

Important portfolios in the government and key executive posts in the public, semi-public and private sectors have sometimes been offered to university professors. Some of the teaching staff of various institutions of higher education have been elected deputies or senators in the National Assembly and appointed members of the two constitutional councils, the Council for Social and Economic Affairs and the Culture and Education Council. Others have, under one form or another and in different capacities, participated in the elaboration of the first and second five-year plans as well as the current Four-Year National Economic Development Plan. In the years from 1967 through 1969, many university professors were involved in the Joint Development Group, working with an American private consulting group from the Development and Resources Corporation in New York, to prepare the now well-known 'Postwar Development of the Republic of Vietnam: Policies and Programmes'. All of them have, however, done so on an individual basis. And never has the university, as an institution, been approached by the government to use its expertise to help find solutions to problems of national interests.

In the interest of the whole nation, efforts should be made to secure and improve the much needed cooperation between the government and the universities in the common work of national development. In this regard, the seminar recently held in Saigon which brought together cabinet members, senior development officers, university leaders and academics with a view to seeking ways and means to increase the contribution of universities to national development planning was a belated but encouraging step in the right direction.

Types of Contribution the University Could Make Towards Development Planning

Conceptually, planning is a continuing process with each of its consecutive stages blending into the next one. These are, namely, planning preparation, plan formulation, plan implementation, plan evaluation and revision, and the preparation and formulation of the next plan, *ad infinitum*. In this process, what are the types of contribution that could be expected from the university? The answer certainly varies from one country to another, depending on the concept of development within the context of each country with different historical and cultural backgrounds and dissimilar social structures.

Benefiting from the painful experiences of economic development in the West and from its desirable economic consequences as well as from its harmful social impacts, the planners in South Vietnam have chosen to embark on the path of a balanced and harmonious development whereby means and ways will be sought to ensure both economic growth and social progress. In doing so, they have set out on the right track because in South Vietnam, even after so many years of war, disturbances and upheavals on all fronts, national aspirations remain strong and pride in cultural and spiritual heritage and values is still alive. Development is worth pursuing only if it is aimed at bringing about economic as well as social well-being for the whole community. The social development side of planning will, therefore, be just as important as its economic side; and the desire for economic change must somehow be reconciled with that for cultural preservation and enrichment.

In this context, the universities will surely be expected to make a far greater and more comprehensive contribution than they are now making towards national development. Of course, training will always remain the most important function of any institution of higher learning in any country. And since education means human investment and human resource development, the universities must fulfil their first mission to provide the country with (i) a sufficient number of well-educated scientists and technologists with adequate academic standards and practical experience and whose knowledge should be related to the conditions of the country, and (ii) an adequate new breed of managers and administrators, including social scientists, who would have a strong foundation in the quantitative aspects of decision-making techniques to organize the public and private sectors where the rapid technological progress is supposed to be taking place.

Thus, 'the universities have the prime responsibility of making available to the nation the right quality and quantity of teachers (including professors and instructors of all grades) and the appropriate forms of knowledge so that there will be an outflow of graduates who will be capable of organizing and supervising the whole range of complex functions that are needed to operate a modern developing country'.[41] But since national development, as emphasized earlier, in character encompasses many aspects other than economic, the universities should not confine themselves to training only economists and other specialists directly needed for national development. These institutions have also the responsibility of training man in all aspects of his development to prepare him for the role he has to play in society. Besides imparting to him knowledge through standard courses, they should pay attention to the fostering of his coöperative attitude, a willingness to make his maximum contribution to the welfare of his compatriots.[42] The training should therefore seek not merely to equip the graduates with a good grounding in basic areas or to provide them with a bag of tools, but to develop their capacity for analytical thinking and finding the right tool for a particular situation, as well as their ability to learn and to re-learn throughout their working careers and to cope with the continuous changes in real life. The universities must play a leading role in introducing new knowledge and initiating needed changes, and provide the society with future leaders as well.

The second type of contribution the universities could make towards development planning is through the conduct of research, particularly development-oriented research. The most important way in which the universities could contribute more fully to development planning is to become development-oriented in academic teaching and research. In this regard, the importance of research, especially inter-disciplinary research, can never be over-emphasized. Its significance lies not only in making education more relevant to the conditions of the country, but also in strengthening the overall contribution of higher education to the planning as well as operational aspects of development.

As teachers, university professors should first develop their own capacity for analytical thinking and acquire the relevant knowledge and practical experience in development. The only way for them to acquire such expertise is to engage in research and consulting. The value of research and consultation by faculty members is too obvious for further explanation or justification. But since research – an important aspect of any programme to upgrade the quality of university staff – can be expensive, it should first be decided the types of research the country needs and can afford.

In view of the acute shortage of qualified professors and the paucity of research facilities, the most urgent types of research which should be given top priority would be those that are closely associated with the universities' academic

[41] Ungku A. Aziz, 'Orientation of Arts and Science Education to Meet National and Regional Needs' in Yip, *Role of Universities in National Development Planning in Southeast Asia, op. cit.*, pp. 81-85.

[42] Vu-quoc-Thuc, 'Report of Proceedings; Summary and Conclusions' in *The Role of Universities in National Development Planning in Vietnam*, The University of Hué (forthcoming).

programmes. For instance, research is needed to determine the goal and objectives of higher education, the numbers and types of university graduates needed for various types of middle- and upper-level management, the most efficient structure for a university, the curriculum which fits best the overall socio-cultural pattern and the economic realities of the South Vietnamese society, and the best way to exploit the resources provided by the present pool of qualified professors.

The second type of research would be of an economic character. In this regard, apart from research on soil and water conditions, natural resources, marketing facilities, economic feasibilities and other applied research, it should also include factors that influence the formulation and implementation of development plans. For example, complaints are often heard about the absence or unreliability of statistics and survey results on population and national accounts, especially as they relate to the rural sector of the economy. Research into these should be conducted for the sake of proper planning.

Also very important to national development is research into the nature of the South Vietnamese society and the ways in which changes can be expedited. Up till now, despite frequent references to social development, too little has been accomplished in this respect either through lack of awareness and concern or as a result of the dearth of human and material resources for this purpose. But if development is to mean something more than just economic, it will surely be relevant for the planners to demand that necessary research be done not only on the economic but also on the socio-cultural aspects of life. If development planning is not to be lopsided and to allow the accumulated social losses to outweigh the economic gains, then the only way is to look more closely at the correlation between the economic and the socio-cultural factors of life. Thus, research must range wider to include the non-economic aspects which can be just as meaningful. But so far these non-economic factors have been largely neglected not only in South Vietnam but also in other Southeast Asian countries.[43] In view of this imbalance, social research is badly needed to help formulate a clearer policy on socio-cultural matters and improve the social development side of planning. This type of research is needed both at the pre-planning stage for correct programming and at the post-operation stage for follow-up and evaluation.

Consultation naturally constitutes the third type of contribution that the universities could make towards development planning in South Vietnam. If university resources were available in sufficient numbers, consultation for development planning could proceed on two levels – general planning and specific planning. According to Professor Patya Saihoo of the Chulalongkorn University in Bangkok, general or overall planning which aims at systematic comprehensiveness can benefit from theoretical thinking of a learned professor in no smaller measure than that of a foreign consultant. Or it could be organized on a team basis, drawing resource personnel from the various disciplines involved (as was the case of the Joint Development Group in 1967-9, referred to earlier on). Specific planning on a particular technical aspect, on the other hand, can be referred to a specialist on the subject.[44] For the university to perform both kinds of consultative services effectively, its personnel must be in constant touch with the social and economic realities of the country, with the problems of real life. Teaching must be based on the empirical needs of the society, using the actual facts and figures that confront the nation in its daily life, not from exotic texts which have little relevance to its development needs. Research must be constantly conducted to keep up with the rapid social and economic changes in order to improve and up-date the curricula and teaching materials and to make them more relevant.

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[43] Patya Saihoo, 'Increasing the Contribution of Universities in National Development Planning – Research and Consulting' in Yip, *Role of Universities in National Development in Southeast Asia, op. cit.*, pp. 107-19.

How much these potential contributions in terms of training, research and consultation can be achieved naturally depends on the human and material resources currently available within the universities on the one hand and on whether or not needed reforms as to the whole system of higher education could be implemented in time on the other, assuming there is cooperation from the government.

Problems Preventing a Closer Cooperation Between the University and the Government

In South Vietnam, it is generally recognized by people within as well as outside the universities that there is a lack of cooperation between the government and institutions of higher education with regard to national development planning. The cause of this deficiency stems from various sources, mainly from the government and the universities themselves.

From within, the universities have to cope with many problems which deter them from cooperating more closely with the government in national development planning. As has been pointed out previously, these problems are related to the position of the teaching staff, the structure of the university system, the curricula, the teaching-learning methods, research and consultation. Most important of all is, perhaps, the acute shortage of professors. Because of the rapid increase in student enrolments, university teachers have become too thinly spread and their teaching loads extremely heavy. As a result, they have little time left after fulfilling their teaching commitments to devote to other functions such as contributing their knowledge to the formulation of national goals or making available their technical expertise to development agencies by doing problem-oriented applied research or acting as consultants. Besides this quantitative limitation, their quality also constitutes another problem. Academically, many staff members are very much under-qualified; hence, they tend to lose the respect and confidence of the government circles. They are inclined towards academic arrogance and aloofness, maintaining some kind of a superiority complex, and disdain involvement in practical matters.

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[44] *Ibid.*

The lack of efficient administration in the universities is another porblem. The present university structure remains almost the same as that inherited from the colonial times. It is neither Vietnamese nor appropriate to meet the challenges of this modern age. This structure is patterned after the obsolete 'faculty system' whereby rigid barriers exist between various types of education – between general and technical and between school and out-of-school education. It is very much teaching-oriented and attaches very little importance to research and consultation. Obviously, such a structure is not suitable, nor can the universities provide leadership and service to the nation. Since the student population continues to grow and the university structure and curricula remain static and rigid, while the nature and variety of skills and knowledge needed in society are changing at an accelerating pace, the structure of the higher educational system has to be so designed that it can provide a diversified range of educational experiences and ensure that students are well prepared for entry into the world of work. Thus education in South Vietnam must be better integrated and more comprehensive on the one hand, and more flexible on the other. The structure should be as simple and uncomplicated as possible so as to keep costs to a minimum, to provide for a minimum of duplication of effort both within each institution and between institutions, and to meet the needs of the central function of the university which is teaching and research.

The current out-dated curricula and teaching-learning methods also stand in the way of a better government-university cooperation in development planning. The present curricula are patchworks of academic programmes from pre-colonial Vietnam and the French-colonial period though lately they have come under American influence. They do not reflect the manpower requirements and employment of the economy nor the urgent need for national cohesion. From the viewpoint of national development, it is important that the content, methods, and output of higher education be related to the realities of the labour market and national development needs.

Obstacles to a closer government-university cooperation could also be traced to the government. From this side, the most important factor is the lack of a firm commitment by the government to long-term development. In the past, two five-year plans were formulated for the periods 1957-61 and 1962-6. Another ten-year post-war development programme was prepared in 1969. There is now a four-year plan for 1972-5. For one reason or another, the first plan was not properly implemented whilst the second one and the ten-year programme were stillborn. The implementation of the present four-year plan is uncertain. There are many reasons for this. The war is, of course, the main reason. The political leaders, who at present have to concentrate on military operations, have niether the time nor the mind to devote to economic development. But the war aside, they do not seem to believe very much in the effectiveness and usefulness of long-term planning. This also reflects the acute weakness of the government as a planning, coordinating, and implementing agent for social changes and economic development, as mentioned earlier. In such a situation, there is naturally no compelling demand from the government for universities to contribute towards development planning, either in terms of training, research or consultation.

The government, therefore, has no pressing need for a really effective system of higher education. In an article on higher education in South Vietnam, Ton-That-Thien wrote: 'For reasons of political expediency, the universities had to be established, their expansion and improvements talked about. But the minds and hearts of those in commanding positions were not there. In other words, they did not *really* care. Thus, the so-called national universities, institutes of higher learning or technical institutes, were really for second-class Vietnamese, the sons and daughters of people without power or money.'[45] At the seminar held in Saigon in November last year, it was also said that higher education in South Vietnam had often been considered by the government as a mere decoration without relevance to the realities of the country or to any practical need. Participants pointed out that the government had not given proper focus on the needs of the universities to make them more appropriate to the new requirements of the nation. Neither had it done anything to secure their constructive contribution on matters of national importance. Obviously, there have been some exaggerations in these analyses. But exaggerations aside, these statements contain some truth. This is best illustrated by the persistent delay in enacting a badly needed national charter for higher education. Another illustration is the very limited funds that the government provides for higher education (see Table IV.8). Roughly, less than 10 per cent. of the annual budget of the Ministry of Education which accounts for about 4.5 per cent. of the total national budget, has been allocated to higher education.[46] In this regard, it might be argued that the government would seem, if not very liberal, at least reasonably generous with the universities considering the desparate wartime situation. But, as Charles B. Green put it, 'it has been as a parent with a child whom the parent does not trust to spend his allowance wisely'.[47] In any case, this would be true only if one does not consider the amount spent for students studying outside South Vietnam. In US dollar terms, according to Green, the government of South Vietnam in 1972, contributed about three-and-a-half million dollars to the public and private universities in South Vietnam. In the same year, the parents and relatives of students studying abroad, not including those who have obtained scholarships from foreign governments and institutions, were estimated to need to send out twenty-four million dollars for the tuition and support of these students. Instead of the regular exchange rates of 420 piastres to US$1 (1972) the government allowed the students

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[45] Ton-That-Thien, 'Higher Education in a Transitional Country Plagued by Colonialism and War' *op. cit.*

[46] Nguyen Truong, 'Higher Education in Vietnam', *op. cit.*

[47] Green, 'University Reforms in Vietnam', *op. cit.*, p. 7.

Table IV.8

National budget for higher education
(in million piastres)

	1969	*1970*	*1971*	*1972*
University of Saigon	224.8	281	799	1,162
University of Hué	116.4	155	244	387
University of Can Tho	166.4	144	190	351
National Agricultural Centre	27.9	55	122.5	392
National Technical Centre	52.4	83.3	109.5	160
Oceanographic Institute	11.8	16	29	45
University of Dalat	*	*	*	25
University of Van Hanh	*	*	*	20
University of Hoa Hao	*	*	*	15
Total	599.7	734.3	1,474	2,557
Total national budget	145,534	197,060	235,000	368,000

Source: Directorate General of Budget and Foreign Aid.
* Figures not available.

to exchange piastres at the rate of 118 piastres to US$1, so that actually the government was subsidizing seventeen million dollars for the students overseas as compared to the three-and-a-half million dollars spent for the students at home. It would seem that the government could have been more generous in providing for the universities at home.

The government also seems to harbour a certain unfavourable complex *vis-a-vis* higher education and does not really want to involve the universities in national affairs. This attitude of the government may have arisen from a variety of reasons. It could be that the government is simply ignoring the universities' capability or potential to contribute to national development planning. Moreover, government officials often do not appreciate the need for research, are impatient with time-consuming and fastidious academic research, and are too worried about possible criticisms and leakage of classified material by academics. Sometimes there is even an irrational preference for foreign experts when equally competent local ones are available. Perhaps no less important is the government's distrust towards university circles. Government officials seem to strongly believe that academics are only good within their ivory towers but are never able to grapple with problems of real life. This basic problem of attitudes, as Yip Yat Hoong put it, 'creates other barriers to university-government cooperation. A vicious circle is in operation. Because of the absence of cooperation between universities and government, academics cannot acquire practical experience. Government agencies then argue that academics are too theoretical and therefore there is no need for their services.'[48]

In this case, it is only natural that a formal institutional framework for university-government cooperation has not existed in South Vietnam. Without such a framework, additional obstacles stand in the way of whatever limited amount of informal, *ad hoc* contact there is. University rules and regulations further hamper greater mobility of staff between the government and the universities. Absence of both monetary rewards and professional recognition, and lack of financial support for research are other disincentives for potential researchers and consultants.

Recommendations for Bringing About a Closer Government-University Cooperation in Development Planning.

Two pre-conditions have to be met if the universities are to be more responsive to national needs. On the one hand, both academics and government officials must accept the idea that the institutions of higher education should play a substantial role in national development. On the other, the universities must have the capacity to properly discharge this role.

The first condition has been met to a large extent in South Vietnam where no one would deny, at least in principle, that higher education must be harmonized with, and closely related to, the development of the country. Since the development process is necessarily associated with fundamental and pervasive transformation in motivation, attitudes, habits, and modes of thought and work, higher education should play an instrumental role in bringing about social change and transformation needed to achieve a rapid rate of economic growth. It is, therefore, no longer sufficient for the universities to concern themselves purely with the transmission and advancement of basic knowledge and common cultural and moral values. They should assume important new functions and commit themselves to the maximization of employment opportunities, population control and family planning, equitable distribution of development benefits, reduction in income and social inequalities; in other words, they should be committed to economic development and social progress. In this connection, it has been noted earlier that so far, apart from lip-service, the government, for one reason or another, does not really want or rather seems reluctant to involve the universities in matters of national concern. In any case, the acceptance of this wider role for the universities is not by itself sufficient.

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[48] Yip Yat Hoong, 'Report of Proceedings: Summary and Conclusions' in *Role of Universities in National Development Planning in Southeast Asia, op. cit.*, pp. 19-20.

With regard to the second condition, the previous sections have already made it clear that higher education in South Vietnam does not as yet have the capacity needed to discharge all those functions. Its obsolete structure, the extreme paucity of qualified professors, the antiquated and irrelevant curricula, the utter absence of research, and the poor teaching-learning methods are there to testify to this. It is obvious, therefore, that in such a situation it is necessary first of all to strengthen and improve the higher education system prior to seeking ways and means to increase its contributions to national development planning. For this to be possible, a better and closer cooperation between the government and the universities will be the decisive factor. Efforts should not, therefore, be spared to remove any obstacles which stand in the way of such cooperation, and to bring about more favourable attitudes towards university-government collaboration. The government ought to discard its distrust *vis-a-vis* the universities, and pay more attention to higher education which should not, under any circumstances, be considered as a mere decoration. The academics ought to do away with their complex of isolation, and fully engage in the tasks of national development. Only then would it be possible to strengthen and improve the system of higher education and closely relate it to the life of the nation.

Once the problem of basic attitudes is properly settled, the process of both overall national development planning and educational planning must be strengthened and closely integrated. This will surely require action on a wide front by both the government and the universities whose programmes need to be closely coordinated to avoid duplication of efforts and to ensure efficiency. The crucial step would thus be the setting up of a proper institutional framework to provide a common meeting ground for academics and senior government officials. Within this institutional framework, other obstacles could be removed and further collaborative efforts promoted. Common procedures could be worked out to permit, and provide adequate incentives (in terms of financial rewards, professional recognition and career advancement) for, more research and consultation and a greater mobility of staff exchange between universities and government development agencies. In this way, the academics could make available, their technical expertise and wisdom, their findings and insights to those who are charged with political decision-making and to other leaders in the society. On the other hand, educational planners could, on the basis of fundamental goals of education defined in the overall plan, make operational and technical decisions by which these broad goals are translated into educational objectives, structures, curricula, syllabi, etc. Such arrangements would certainly provide for a closer integration of educational and manpower planning into overall development planning, and hence, would bridge the gap that at present isolates higher education from urgent national concerns. It would also help to secure vertical continuity between various levels of education and horizontal continuity between various types of education either formal or informal, at school or out-of-school.

For such improvements to materialize, much remains to be done on the part of the universities. In the first place, there is a pressing need for a solid legal basis whereby academic freedom and university autonomy relating to administrative, financial, and personnel management could be well defined and properly provided for. The legislation must clearly delineate the structure of higher education, the relationships between various parts within each unit and between various institutions within the whole system. Appropriate rules and regulations must also be laid down to govern the relationship between the universities and the nation, to determine with a high degree of specificity the authority of the university administration, its responsibility and accountability to the government and to the society at large. Secondly, before attempting to increase its contribution to national development planning, the university must plan its own operations and development. This points to the need for an education plan which allows the university to adapt itself to the changing conditions of the country and to fulfill its social and economic objectives. The need becomes more compelling considering the recently unplanned quantitative expansion which has resulted in the present crisis. The plan would make recommendations as to a balance between the skilled manpower requirements of national development and the quantity and quality of what the higher educational system produces. It would survey the present pool of qualified professors, recommend a more rational exploitation of their services, and provide for the development of additional professorial resources. This is particularly important, and perhaps most urgent if the universities are not to jeopardize their teaching function, and can still engage in research and consultation. The plan must also see to it that an adequate mechanism will be designed within the administrative structure for the development of academic programmes, i.e., curricula, instructional materials, teaching-learning methods and research. The universities must be considered as centres of both teaching and research. Academic programmes must not only be adjusted to the national quantitative needs for various types of high-level human resources, but also range wide to promote a better understanding of traditional cultural values, as well as of present cultural phenomena and tension which arise from the interplay of different Western and Eastern influences. In other words, the purposes of higher education, its tools and methods must be re-fashioned both qualitatively and quantitatively to serve the wider ends of economic development and social change and transformation. The university's field of influence has to be broadened to promote research, extra-mural similar activities, and community and cultural development. And the role of universities in national development is is dependent on the re-organization, re-orientation and strengthening of the system. Of course, this would require further studies on various aspects of the mutual impacts between higher education and the society at large and on how the universities' contributions might be increased and enriched. However, if the above-mentioned steps are taken, then the institutions of higher education in South Vietnam could play in a far more substantial role than they now do in the process of national reconstruction and development.

CONCLUSIONS

The Vietnamese economy was broken into two halves with the partition of the country in 1954. The South, rich in agricultural resources, was cut off from the North endowed with great industrial potential. As a result, their economic structures were seriously distorted, and their respective development greatly hampered.

On its part, South Vietnam, with a total area of more than 170,000 square kilometres – 5,000,000 hectares of fertile arable land, 5,600,000 hectares of forest replete with precious timbers and a coast of some 2,500 kilometres offering bright fishing prospects – would have been able to develop a self-sustained economy, had it known peace during the last two decades. Unfortunately, the current destructive war has instead destroyed its infrastructure, paralyzed its agrarian economy, hindered its industrialization programme, distorted its economy, and made the country heavily dependent on foreign concessionary aids.

With the ceasefire, it is hoped that lasting peace and stability will follow and that the Vietnamese people on both sides of the 17th parallel will be reunited for the reconstruction and development of Vietnam after so many years of war. For South Vietnam, the road ahead still remains replete with many challenging problems. Right after the war, there is an immediate need to resettle displaced people of all kinds, redeploy the labour force, restore and expand the transportation and communication networks, rebuild damaged industries and start new ones, and rehabilitate the rural economy.

Given peace and stability, there can be little doubt that the economy will resume its interrupted development. But how fast it will develop and how rapidly the desire of the South Vietnamese people for better living standards can be satisfied will depend to a great extent on the ability of the government and the people to mobilize domestic and foreign resources to finance the reconstruction and development programmes, check inflationary pressures, and expand exports.

None of these can happen without good planning and plan implementation. To meet this challenge, the government should spare no effort to secure the cooperation of the universities in the planning of economic adjustments and development. In other words, a clean and efficient administration under enlightened leadership, coupled with a far more strengthened and relevant system of higher education, is what is really needed in post-war South Vietnam. The institutions of higher learning must, therefore, be given more financial and moral support, reorganized and re-oriented, to take on important new functions. Apart from producing high-level manpower needed in the economy and conducting research into problems of high priority in national development, universities must also provide leadership in various national developmental efforts. In the face of these challenging tasks, the South Vietnamese universities will have to rely on the cooperation of their government and the technical and financial support of friendly nations as well as international organizations such as RIHED, SEAMEO, UNESCO, and others.

The work of national reconstruction and development will be hard and painful, and will certainly require great effort, perseverance and intelligence. The South Vietnamese people have proved during their long and eventful history that they have never lacked these qualities. There are, of course, many roadblocks ahead. But after the storm, it is hoped, there will be fine weather.

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Part 4

PHILIPPINES

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SECTION I

HISTORICAL BACKGROUND

Survey of Social and Economic Development 1962-72

This survey covers the administrations of President Macapagal and President Marcos. The Macapagal administration began in 1962 and ended in 1965. The Marcos administration, on the other hand, has spanned from 1966 through the present (March 1973). There is no way of telling at this point how much longer it will go on, especially since the declaration of martial law throughout the Philippines on 21 September 1972.

In the Macapagal administration, real output (GNP) expanded on the average at the annual rate of a little over 5 per cent., from P13 billion in 1962 to P15 billion by the end of 1965. The first Marcos administration steered the economy to a significantly more rapid rate of growth, raising real output from P16 billion in 1966 to P19 billion in 1969 or by slightly more than 6 per cent. per annum. Over both regimes, the population increased from 29 million in 1962 to 37 million in 1969 or by a little over 3 per cent. per annum. Per capita real incomes have generally risen by 2 per cent. per annum, from an average of P435 during the Macapagal period to P505 in the first Marcos administration. The evidence suggests that they have significantly accelerated under Marcos.

The second Marcos administration is now in midstream, and formally terminates in December 1973. It started in 1970, during which national output decelerated from its 1969 pace to a little over 5 per cent. of growth, even as it picked up again during 1971 when expansion of real output averaged more than 6 per cent. The floods of July washed away some 30 per cent. of the sugar output and some 40 per cent. of the rice output for 1972. Thus, according to some estimates at the Center for Research Communication (CRC), the growth rate for the year will probably be no more than 3 per cent. The imposition of martial law and its impact on economic effort is something that will have to be assessed somewhat later.

Although the general drift since 1962 has been towards moderate rates of economic growth, economic welfare or the distribution of the gains of growth has remained about the same over the last ten years. Studies of income distribution at the Bureau of the Census and Statistics tend to show that since 1961 to the present the richest 10 per cent. of all Filipinos have been appropriating 40 per cent. of the national income. This pattern of income distribution has led to a situation where the level of caloric intake among Filipinos averages only 65 per cent. of total requirements. Twenty-five per cent. of all the households live in dilapidated dwellings. Adequate waterworks are made available to only about 2.5 per cent. of all the families; for another 20 per cent. water comes from springs, creeks, streams, rivers and the good rain. Only 23 per cent. of all the households have access to electricity. As many as one-third of the entire population have no toilet facilities at all. And one-fifth of the farm population has never gone to school at all.

Skewed as it is, income distribution has further been exacerbated by the increasing rate of inflation. Consumer prices have risen at the annual rate of 5 per cent. in 1962-5 and by a little less than 5 per cent. in 1966-9. They shot up 22 per cent. in 1970-1 alone. They have tended to accelerate during 1972, especially in July, after the floods. However, since the declaration of martial law in September, they have started to decelerate, although their pace would probably never come close to the moderate inflations of the 1960's.

The rate of joblessness, on the other hand, has been decreasing, as the proportion of the labour force with full-time work rose from an average of 64 per cent. in 1962-5 to 67 per cent. in 1966-9. It rose further to more than 70 per cent. in 1970-1. Agriculture continues to employ as much as 48 per cent. of the labour force, while manufacturing engages another 12 per cent. and service industries the rest. However, agriculture accounts for only 30 per cent. of the national output. Manufactures constitute another 17 per cent., with service industries accounting for the bulk of the domestic output. This has been the structure of production for most of the period in spite of an annual growth in farm output of 4 per cent. in 1961-5, more than 5 per cent. in 1966-9, and 3 per cent. in 1970-1. Expansion of manufactures, on the other hand, went up from less than 6 per cent. to slightly more than 6 per cent., but backslided perilously to 3 per cent. during 1970-1.

Expansion in manufacturing dropped in the face of the traumatic transitions following devaluation of the peso early in 1970. The devaluation raised the peso cost of expanding manufactures, since both the machinery and materials necessary to their expansion have to be imported for the most part. And export earnings since 1963 failed to catch up with import disbursements, in spite of the incentives for exports and disincentives for imports implicit in the devaluation of 1962 and 1965. As a result, the country's dollar reserves levelled precariously at $102 million per annum over this period, although they rose to $170 million in the next four years through 1969, and even rising further to $231 million in 1970-1. The latter was achieved by applying all manner of strenuous controls on monetary expansion, which eventually reduced on momentum of industrial growth itself.

Money supply expanded rapidly as a matter of course during the election years 1963, 1967 and 1969. Monetary expansion over the period 1962-5 averaged nearly 7 per cent. per year, but accelerated close to 12 per cent. in the following four years, with the largest expansion occurring in 1969.

A good part of the increase in money supply was due to rapidly rising monetization of the public debt. Since 1962, the government has been spending more than it raised in taxes. The deficits were covered by massive government borrowing. Frequently, this type of spending in and of itself failed to produce vendible surpluses. It seemed to fan the inflationary fires that are already implicit in too rapid an increase of the money supply. In 1969 alone, the net credit extended to the public sector constituted the principal ingredient to the sharp expansion of money supply.

The government sought to relieve the inflationary pressure by substantial importation until the country's dollar reserves had dwindled perilously to $125 million by the end of 1969. This precipitated the peso devaluation or peso float early in 1970. Neither households nor industry can be said to have completely recovered from floating the peso.

History of Development Planning

The idea of development planning emerged in Philippine consciousness as early as 1935, when the National Economic Council (NEC) was created by Commonwealth Act No. 2. The legislation itself was initiated by President Manuel L. Quezon. It authorised the NEC to advise the government on economic and financial matters and to plan the national economy. The economic programme was to reflect requirements of national independence. In pursuit of this, Quezon in 1938 constituted the Joint Philippine-American Finance Commission. Its job was to plan the transition of the colonial economy. However, the Second World war completely thwarted this effort.

It was not until 1946 that the effort to plan was renewed. The timing could not have been better. The Philippines was one of the most ravaged countries in Southeast Asia after the Japanese onslaught. The Americans who had liberated the country with a lot of blood, money and drama were anxious to pursue even the liberation of its economy from a colonial structure. Toward this end, rehabilitation of agriculture, industry, commerce and transportation was started in 1946 under the leadership of President Manuel Roxas. Since then, as many as sixteen plans have been drafted.

The first was the Hibben Plan. This was a technical memorandum prepared in 1946 by Thomas Hibben and his colleagues on the staff of the Joint Philippine-American Finance Commission. It emphasized import substitution, expansion of export capability and development of such infrastructure complements as power, transportation and communications. It covered the period 1947 through 1951, partly because large US rehabilitation payments were anticipated to support a growing level of domestic investment and partly because the preferential trade arrangements in the Philippine-United States Trade Agreement of 1946 would come to an end in five years. It was presumed that by 1951 the Philippines would have successfully made the transition to economic self-determination. A total of P2.2 billion in development expenditures was planned, roughly 65 per cent. in imported components and 35 per cent. in local content. Sources of funds were not adequately identified. Neither were expenditures clearly assigned between government and private enterprise.

The Hibben Plan hardly got off the ground in 1947 when H.E. Beyster Corporation, an American firm of industrial consultants, collaborated with the National Development Company on another programme for industrial rehabilitation and development. An investment bill of P1.4 billion was generally planned for industry, export agriculture and mining, and almost to the neglect of food-crop agriculture. Funding was taken for granted, coming as it was thought from Japanese reparations and American war damage payments. There was virtually no division of investment activity between the private and public sectors. The government had no effective control over the pattern and periodicity of investment outlays, financed as they were for the most part by the US government. The Beyster Plan went the way of the Hibben Plan: to the realm of oblivion.

But some efforts at planning went on, almost as a matter of course. Thus, before 1947 was over, two other attempts were made: one in June in the Report of the Philippine–US Agricultural Mission; and the other in December with the publication of an Electric Power Programme for the Philippines, a joint effort of the National Power Corporation and Westinghouse Electric International Corporation. The June effort stressed the rehabilitation and development of agriculture over a long-run period. The December effort, on the other hand, indicated a programme of power development over a twelve-period year through 1960, with specific projects during the first five years. Financial support for the various hydro-electric power plants were to be financed by the World Bank. Although the government eventually adopted this programme it only did so after monumental delays. The Ambuklao project, for example, got to a workable stage only in 1957, and the Binga project even much later.

In 1948, on the initiative of Miguel Cuaderno and Filemon C. Rodriguez, a fifth development programme was drafted. It was intended for the period 1949-53. Projects with quick turnover were emphasized. A total of P1.8 billion in development expenditures was projected. Special efforts were taken to prepare the Philippines for the termination of preferential tariff arrangements and the diminution of unilateral transfer payments from the United States. Although sources of financing were considered, taxation and public borrowing through sale of government bonds were hardly taken into account. Financing was to be supplied principally by the new Central Bank which extended some P200 billion in bank advances to the government. Half of this credit went to agricultural projects. The other half was expended for the most part on government businesses that eventually collapsed. A part went to manufacturing, transport service and similiar public utilities, which turned out productively in most cases.

President Quirino in 1950 constituted a Philippine Economic Survey Commission with Jose Yulo as Chairman. This Commission cut down by half the expenditure planned earlier by Cuaderno, because of the fiscal and balance of payments crises in 1970. The development of agriculture was stressed, principally for domestic consumption and for export. Irrigation facilities were highlighted as a matter of course.

Hardly had the Philippine government implemented the Yulo plan than US President Truman submitted to President Quirino the Bell Mission Report. This document became the benchmark for the economic policies that got formulated through 1953, even as it echoed the principal anxieties of the Yulo Plan of 1950.

In 1953, Yulo in collaboration with the US Economic Cooperation Administration (ECA) and the Philippine Council for US Aid (PHILCUSA), of which he was chairman, prepared another economic development programme. Six projects worth $1.2 million were to be financed by PHILCUSA-ECA, with over half a million pesos in counterpart funds for their operation.

The National Economic Council was reorganized in April 1954. One feedback of this effort was the adoption of another socio-economic programme for 1955 through 1959, drafted by Filemon C. Rodriguez. Much attention was given to indigenous industrialization for job creation, and to the participation of private enterprise. A net investment of P4.1 billion was programmed over the next five years, P1.7 billion on the part of government and P2.4 billion by private enterprise. Republic Act No. 1000 was legislated in June 1954, to issue P1 billion worth of bonds in support of the development expenditures. However, no schedule was established between the expenditure of bond issues and the projects specified in the Rodriguez plan.

The machinery for economic planning was reorganized once more by President Magsaysay in 1956. A separate office each for national planning, foreign aid coordination, and statistical coordination and standards were constituted in the National Economic Council. The NEC tried to integrate all previous planning experiences into its 1957 Plan, covering the period 1957 through 1961. It stressed the role of private enterprise and relegated public investment to an expansion of economic and social infrastructure. However, this plan failed to get congressional support, and was hardly implemented. Insofar as public investment went, its implementation was substantially marred by the intransigence of the Budget Commission, which pursued its own style of fiscal planning quite independently of the NEC, on the pretext of Executive Order No. 236 (13 February 1957). The Commission's so-called 'five-year fiscal plans' became the basis for the public budget and congressional appropriations.

This planning mishmash continued to bedevil subsequent efforts, in spite of the formal introduction of a Filipino First Policy into the preparation of the 1958 Plan directed by Jose C. Locsin. To further compound the situation, Miguel Cuaderno, then serving the latter part of his second term as Governor of the Central Bank, interposed in 1959 the so-called Philippine Stabilization Programme. It was to prepare the economy for a transition to a free foreign exchange market, which meant a devaluation of the peso.

The devaluation was effected by President Macapagal in the course of formulating his Five-Year Integrated Socio-Economic Development Programme for the period 1963 through 1967. The shift in exchange policy was instigated by the poor performance of the export sector under a regime of exchange controls. It was thought that the protectionism of the 1950's had failed to accelerate expansion of domestic manufactures, and probably added to overall deceleration of economic growth since 1955. The plan stressed the principle of balanced growth.

But, like its predecessors, the Macapagal Plan was aborted in the hands of an uncooperative government bureaucracy. In fact, its principal architect, Sixto K.

Roxas III, otherwise a capable man, left government service, almost despairing of the near hopelessness of government to make any use whatsoever of economic planning.

The plan, however, was reconstituted in 1966 by President Marcos. The first Marcos government emphasized expansion of national facilities for rice production, transportation, and education, especially at the first levels. In many ways, it was a useful orientation. Rice output expanded dramatically until 1967, roads and schools multiplied, though not rapid enough to keep up with the requirements of a maddeningly increasing population.

This gap, plus many other chronic gaps in Philippine society, generated more joblessness, inflation that kept dogging at gains on personal incomes, and a balance of payments situation that, by the end of 1969, compelled drastic changes in economic policy. One of these was the decision to 'float' the peso on the exchange market, in short, a devaluation. It was effected in February 1970, and came in the midst of a strident youth activism in the country, the dimensions of which had never been seen before. The floating peso discouraged substantive growth in domestic manufactures as the cost of money and wages adjusted in response to the devaluation. Cost structures changed so drastically that the original second Marcos Plan for the period 1971-4 had to be modified in many important respects. The modified plan was adopted by the NEC in July 1971, covering the period 1972-5.

Although the Plan was modified under the scrutiny of Gerardo P. Sicat of the NEC and his colleagues at the School of Economics of the University of the Philippines (UP), its efficacy has been placed under serious doubt by social accountants of the Center for Research Communication, a private economic research institute in Manila. In any case, the first year of its operation has been irreparably marred by the floods in July and August 1972, and the imposition of martial law since 21 September

Nature and Scope of Development Planning

Much of the postwar experience of the Philippines in development planning has been characterized by patchwork operations. The life cycle of an economic plan started and ended with the administration of a particular leader, and was periodically frustrated by an intransigent legislature. Even the Macapagal Plan, which represented the first sound effort of the country's economists to make use of planning, was short-changed by the Budget Commission which frequently preempted the planning of fiscal resources. The first Marcos Plan which grew out of the Macapagal Plan eventually got fragmented as the National Economic Council and the Presidential Economic Staff (PES) vied with one another in assuming the implementation of its various parts. The situation was ameliorated only upon the appointment of Gerardo P. Sicat as Chairman of NEC, who in 1971 modified the second Marcos Plan with the help of an economic model constructed by economists of the UP School of Economics.

Evaluation of Development Plans

For most Filipinos, the development plan has assumed the same status as that of the Bible, an important document with a lot of highmindedness that no one particularly cares about. Such cynicism has grown out of continued disregard by the political leadership of the merits of economic planning. There has been much lip service to its usefulness, but hardly any follow-up of its requirements in time, money and effort. Both the Macapagal and Marcos Plans have been carefully thought out, but they have been thwarted by a structure that has been slow at modifying its procedures and systems in response to the discipline of an economic plan.

Role of the Universities

Economic planning in the Philippines has relied principally on manpower available in the government service, whether local or imported. In the 1950's, it used to be fashionable to import US or UN economists to direct local efforts at constructing a development plan for the country. Since the early 1960's, however, Filipino economists have increasingly assumed the direction of efforts toward development planning: and in 1962 particularly, when President Macapagal appointed Sixto K. Roxas III to head the Programme Implementation Agency (PIA) which collaborated very closely with the National Economic Council in the formulation of development plans and their subsequent implementation. The PIA initiated the idea of recruiting to the government service some of the best university graduates, usually with advanced studies at American or European universities.

This practice was continued during the Marcos administration when the PIA evolved into the PES. It was further encouraged by the appointment in 1971 of Gerardo P. Sicat, a professor of economics at the UP School of Economics, to the chairmanship of the National Economic Council. Since then, a number of university professors have gone on sabbatical to help the government in developing a consistent economic plan for the country. Although it is a recent development, the recruitment of university talent to government efforts at planning is a promising sign that its manpower requirements will be stressed in the educational plans of the university themselves.

SECTION II

DEVELOPMENT OBJECTIVES AND STRATEGY

Social and Economic Policy

In the matter of social policy, the government has increasingly emphasized expansion of the middle class, elimination of unnecessary monopolies, and the pursuit of social justice in the distribution of the gains of growth between consumers, labour, and capital groups. It is striving somewhat strenuously to reorganize the national school system toward generating the skills useful to economic growth. Although foreign investment is welcome, available incentives to industry tend to favour continuous indigenization.

Economic policy is directed at increasing per capita incomes, accelerating job opportunities, diffusing more equitably the gains of growth, dispersing industries to other regions of the country, stabilizing prices so that economic effort can be intensified. National consciousness over the chronic problems of dollar shortage and substantive unemployment has led to a good deal of stress being laid on export expansion, development along labour-intensive activities, and creation of industrial linkages that stimulate regional growth.

Development Objectives

The principal objectives of development planning are land reform; manpower training for industry; expansion in the range of infrastructure; social welfare and community development; family planning; growth of the cooperative movement; reorganization of the educational system to meet the manpower requirements of national development; low-cost housing; rapid electrification of the rural regions; self-sufficiency in food production; expansion in the level and range of exports; acceleration of tourism; development of cottage industries; more effective land distribution; and the expansion of health care available to the largest number of people.

Development Targets

The development targets of the Philippines for the next three years are approximated in the *Four-Year Development Plan* adopted by the government on 23 July 1971. These are measured on a fiscal-year basis, and expressed in 1967 prices. Although the recent events have tended to qualify the degree of precision about these targets, they still probably represent workable orders of magnitude and are useful in that sense. In any case, the newly-constituted National Economic and Development Authority (NEDA) which has replaced the defunct National Economic Council (NEC) at the preparation of all these estimates is hardly organized as of this date (March 1973) to do any useful, much less reliable reestimation of the development efforts that have become or will be necessary since

21 September 1972, when martial law was instituted, and had tended to slow down the momentum of economic effort initiated by 1 July 1972.

As far as the total economic activity (GNP) is concerned, it is expected to increase from P33 billion in 1971 to P43 billion by 1975, representing an average rate of growth of about 7 per cent. per year over the plan period. The national population is estimated over this period to increase by a little over 3 per cent. every year, from some 37.8 million in 1971 to about 42.7 million by 1975. Thus, per capita incomes are projected to increase some 4 per cent. each year, from P904 in 1972 to P1010 by 1975.

In the matter of national expenditures, personal consumption expenditures will average close to 73 per cent. of total expenditures and will rise in value from nearly P26 billion in 1972 to P31 billion by 1975. Current expenditures of the government, on the other hand, will increase some 6 per cent. each year, from P3.1 billion to P3.6 billion during the same period, averaging 8.7 per cent. of the total flow of expenditures. Gross domestic capital formation, which represents some 23 per cent. of the total expenditures, are expected to rise from P8 billion to P10.3 billion, or by more than 11 per cent. per year. The bulk of this, some 89 per cent. on the average, will come from private capital spending and the rest, close to 11 per cent., out of government capital spending, even as the latter is expected to accelerate by more than 30 per cent. per year from P682 million to P1.3 billion, and the former, by less than 20 per cent., from P7.3 billion to P8.9 billion between 1972 and 1975. Exports, which will account for 19 per cent. of the total expenditures, are expected to rise by a little more than 10 per cent. every year, from P6.6 billion to P8.8 billion. On the other hand, imports which will continue to represent more than 21 per cent. of all spending will increase nearly 11 per cent. per year, from P7.3 billion to P9.4 billion. Throughout the plan period, however, net payments abroad for domestic use of foreign resources, which will constitute close to 2 per cent. of the total expenditures, will increase from P633 million to P746 million, or by more than 4 per cent. each year. All these expenditures are expected to generate 2.3 million new jobs over the plan period, although the labour force will grow by half a million every year and as many as 3 million will remain underemployed.

Perhaps a word or two should be said about the estimation of all these projected targets that we have just described above. They are derived from a macroeconomic model, principally formulated by Professor Jose Encarnacion, Jr., of the University of the Philippines School of Economics. On the whole, the model is mechanically consistent and has the additional virtue of focusing the supply dimensions of economic growth. However, it is vitiated by a number of questionable ideas about the nature of economic behaviour in the Philippines.

The investment behaviour, for example, is thought to depend positively on the price level, and negatively on money wages, if it is to be a profitable process. However, when one considers the trend on industrial prices and money wages in Philippine manufacturing since 1956, the evidence shows that both have been increasing at the same time that investment in manufactures has been rising, even as prices rose more rapidly than wages did, suggesting a positive spread (profit). In fact, the data available at the Census Bureau indicate that the spread between the value-added and the payrolls ratios per unit of output increased from 0.304 in 1956 to 0.334 by 1967. Money wages rose as a matter of the legislature bowing to labour pressure. In spite of their increase, however, investment kept expanding on the margin. At the practical level, of course, the businessman determines his profit on a cost-plus pricing ratio. He does not necessarily refrain from expanding productive capacity on the margin even as money wages increase, so long as he anticipates a positive difference between his selling price and unit costs. In short, the crucial relationship between investment and money wages is not necessarily negative.

Sectoral Development Programmes

The plan envisages modest changes in the structure of the Philippine economy during the period 1972-5. Agriculture, which is expected to increase its output by over 5 per cent. per year, from P9.6 billion in 1972 to P11.1 billion in 1975, will continue to represent one-third of the national product (net domestic product). This growth in farm output is forecast on significant outlays made on irrigation, drainage, organization, rural credit and land use.

Manufacturing, which accounts for one-fifth of the national product, is projected to grow by more than 6 per cent. each year, from P5.5 billion to P7.2 billion. However, this expansion will not be forthcoming unless enormous investments in infrastructure are made, including inexpensive power and industrial research. The focus will be on export-oriented industries, under the stimulus of an attractive exchange rate policy. Part of the industrial programme is an encouragement of mergers under modern management to make Philippine manufacturing competitive with the rest of the world, and diffusion in the ownership of industrial property.

The service industries are expected to increase by 4 per cent. every year, from P6.6 billion in 1972 to P7.5 billion by 1975. But they will continue to represent a little over one-fifth of the national product. On the other hand, trading (wholesale or retail) will continue to account for a little over 15 per cent. of the national product and will increase annually at the rate of more than 5 per cent., from P4.4 billion to P5.2 billion.

Over the plan period, mining and construction are expected to grow most rapidly, the former at an annual rate of close to 22 per cent. and the latter, at a little more than 13 per cent. However, mining activities account for only a little more than 3 per cent. of the national product, while construction represents just 3 per cent. As a matter of fact, transport services which are expected to grow by nearly 6 per cent. per year will constitute a slightly bigger fraction, close to 4 per cent., of the national product. In land transport, a lot of emphasis will be placed in expanding railway rolling stock and the highway system. The problem of water transport depends for a solution on the creation of more bottoms as well as on the construction of additional harbour facilities. Air transport will grow with the improvement of airports, navigational aids, telecommunications between Luzon and Visayas are being expanded to supply a nationwide network of telephone and radio facilities with complete automatic telegraph relay system. Internal communications in the different urban areas are expected to improve with the addition of more trunklines and long-distance circuits.

Policy Instruments

The period under review (1962-72) has been, by and large, characterized by a relatively free environment for economic effort. President Macapagal inaugurated it by a decision in early 1962 to let the Philippine peso find its real value in a free exchange market, a decision that was reaffirmed in November 1965. This process of devaluation, while a traumatic adjustment for most of the import-dependent industries raised in a climate of an overvalued currency since 1946, stimulated efforts to indigenize the production of working materials. Thus there was significant pressure toward some backward integration of industries.

When President Marcos took over in 1966, the elements of excessive liquidity in the economy had already been spawned in the course of the 1965 elections. If one takes the entire decade between 1961-71, as a matter of fact, money supply increased at an annual rate of 13 per cent., from P2.2 billion to P5.2 billion. The expansion since 1966 has averaged 10 per cent. each year, and during the last quarter of 1971 and the first quarter of 1972 by nearly 15 per cent., which is about the ceiling that money supply is allowed to increase at any one period according to the statutes (R.A. 265) that created the Central Bank of the Philippines. Over the same period, however, the expansion in the level of real output averaged some 6 per cent. a year, and since 1968 it has in fact decelerated, even as Filipinos exercised little or no restraint in multiplying their numbers.

The excessive liquidity since 1966 simply led to excessive importation as a matter of course. While non-trade dollar balances averaged only $100 million, imports during 1967-9 exceeded merchandise exports by $270 million every year. Eventually, the Central Bank had to dip into the country's international reserves to support the excessive importation. Imports were averaging some $85 million per month, and if one goes by the rule-of-thumb policy – to maintain international reserves equivalent to three months' supply of imports – a comfortable level of reserves would have been $255 million per year during 1967-9. The reserves available at the end of 1969 however amounted to only one-and-a-half months' supply of importables.

As if this was not enough reason to be alarmed, the situation became even more alarming in the face of an international indebtedness of $1.5 billion in December 1969. Some $482 million would have to be paid in mid-1970, $387 million in amortization of the principal and the other $95 million in interest charges. Altogether this debt service amounted to 33 per cent. of the Philippine export proceeds expected during 1970.

Thus the government resorted to another devaluation of the peso in February

1970, coming in the guise of a 'peso float'. It helped towards taming importation to a bearable level. But it failed to discipline the inflation, because it never was meant to do this in the first place, since devaluation *per se* is no cure for the type of excessive liquidity that was generated in the course of fashioning a fiscal policy which largely ignored common sense in balanced budgets for an underdeveloped and populous country. The devaluation, therefore, merely raised the peso price of imports and reduced their quantity in the process. In a matter of months, it compounded the rate of inflation as the total flow of purchasable goods contracted in the face of import cutbacks.

As inflation intensified, the government reacted by organizing, in June 1970, a Price Control Council (PCC), setting the ceiling prices on medicines, food, clothes, fuels, construction materials, school supplies and fertilizers. The economics of price ceilings, however, tends to show that as soon as these are set at *any* level, the quantity demanded of the commodities will exceed the quantity supplied at those prices. Price controls, therefore, tend to beget shortages of the very commodities they seek to regulate. The situation gets increasingly perverse as the suppliers remove their goods to blackmarkets, where they are dispensed at whatever price the market will bear. In the process, shortages become more acute, and inflation heightens to a point of exasperation. The PCC sessions in fact got characterized by so much log-rolling which generated endless heartburn and eventually frustrated all the parties involved in them without disciplining the rate of inflation.

Since the inflation relentlessly worsened, public policy next reacted by legislating higher minimum wages, at which point, production costs simply accelerated, since labour outlays constitute a significant portion of the total cost of producing a commodity. Producers, especially those with substantive import dependence, got caught in the squeeze of a devaluation that significantly raised their peso outlays for materials and the amortization of equipment imported on a deferred payment plan, and a higher minimum wage requirement which increased in large part their wage bills without the necessary commensurate increase in labour productivity. Those that could take a profit squeeze survived, but many more producers were sacrificed in the heat of the cost inflation. A lot of men were thrown out of wórk, simply because legislating a price floor such as a minimum wage means that the quantity of labour supplied at that price exceeds the quantity demanded. The net effect of all these policy vacillations was an acceleration of an even greater inflation as increasing joblessness and underutilization of capacity shrank the flow of purchasable goods.

However, if one closely follows the aetiology of these policy shifts, it becomes clear that their origins are largely monetary in nature, insofar as their economics goes. Obviously, their political economy springs from a lack of will to live by elementary canons of good public finance and the proclivity of the Central Bank to pander to undisciplined public financing.

There are a number of other policy instruments which have been applied, but may have to be rethought. We have already alluded to the easy recourse to raising minimum wages whenever the cost of living accelerates. Minimum wages for industry and agriculture were first introduced in 1951, and have been raised twice since then, in 1965 and 1970. Enough has been suggested that although this appears like some political economy, it is not necessarily good economics. The Philippines has a fairly generous supply of useful labour. Its utilization in greater proportions in industry and modern agriculture may be hindered by habitually raising minimum wages that in large part do not reflect real gains in productivity. One estimate indicates that insofar as the 1970 increase of minimum wages is concerned, only half a million workers, or less than 4 per cent. of some 12 million in the labour force seemed to have benefited from the revision, while 60 per cent. of the entire labour force continue to receive less than the statutory minimum wage.

In the matter of interest rate policy, the 1916 Usury Law has been roundly frustrated by lending institutions, as one might expect them to do under a regime of capital shortages. Tariff policy has tended to be too protective, and has not succeeded in accelerating backward integration among industries. In addition its administration is cumbrous.

Efforts are made to induce more foreign investments to enter the country, as is clear from the legislation in 1967 of the Investment Incentives Act which created the Board of Investments (BOI), the Mariveles Foreign Trade Zone in 1969, and the Export Incentives Act in 1970. However, foreign investors remain timid, partly because of inadequate infrastructure complements and partly because the rest of Southeast Asia seem to offer better terms than are available in the Philippines. The Foreign Trade Zone has been earmarked for export processing for the last three years, but remains sorely lacking in the type of infrastructures which would help reduce unit cost of production for new enterprises.

The government tax effort has been limited to raising revenue that averages about 14 per cent. of the GNP, including proceeds from export and social security taxation. Seventy-five per cent. of the tax revenue are generated out of commodity taxation, and the other 25 per cent., from taxation. Such a tax structure will probably remain for another two generations, principally because many of the so-called incentives extended to industrial enterprises are in the nature of waivers on corporate income taxes for as long as five years, in addition to waivers on sales and excise taxation for the purchase of equipment and working materials either in the Philippines or abroad. In fact, the extension of such tax incentives to foster industrialization compels the government to forego revenue that could well be applied toward an expansion of infrastructure requirements to support further industrialization.

Government expenditure, as a matter of fact, has gone largely to the payrolls of the public school system, the army and the bureaucracy. The expansion of physical infrastructure is hindered in the process. In recent years, government expenditure policy has increasingly emphasized support of low-cost housing, agrarian reform and rural electrification since only about 7 million out of 38 million Filipinos are served by any form of electric services.

Finally, in the matter of a rice price policy, the government has tended to support the prices received by rice producers and stabilize the prices paid by consumers. This has not altogether served the interests either of the farmer or that of the consumer, principally because the price floors and ceilings are becoming increasingly removed from the supply-and-demand realities of the national rice situation. There is ground for the government to begin shifting the emphasis of its rice subsidy programme towards reducing the cost of rice production by subsidizing its requirements for water, fertilizers, and pesticides. The present policy has spawned considerable corruption, without stabilizing the rice market.

Role of the Private Sector

Private initiatives have been the principal sources of economic growth for much of the postwar period in the Philippines. However, these have been supported by government financing in one form or another and on a such grand scale that one sometimes wonders whether the initiatives are indeed private, or government. The Development Bank of the Philippines (DBP), for example, which is a wholly owned subsidiary of the Philippine government, has underwritten agricultural and industrial activities to the tune of P19.4 billion in approved guarantees, loans and equity investments as of 31 December 1972. This alone makes the DBP the biggest long-term financial house in the entire country supporting private efforts at national development. It accounts for some 80 per cent. of the total long-term loans to industry and agriculture. The Private Development Corporation of the Philippines (PDCP), which was launched in 1963 and continues to operate with the support of the government, the USAID and the World Bank, and the National Investment and Development Corporation (NIDC) which is a subsidiary of the government-owned Philippine National Bank (PNB) account for the other 20 per cent. In fact, it is very doubtful whether the entire sugar industry, which is extended to it by the PNB. This is true for the growing of sugar, as well as for its milling and refining. Moreover, the Government Service Insurance System (GSIS) and the Social Security System (SSS), the government agency that handles social insurance for the private sector, have also been massive financial supporters of private initiatives to development. These five financial institutions, the DBP, NIDC, PNB, GSIS and SSS, represent the avenues of government penetration in private business. Their withdrawal of support could very well paralyze much of the agricultural and industrial activities in the country. Their support determines in many important respects the tenor of private initiatives applied to development. In a number of instances, however, they have also been responsible for promoting private businesses that turned out to be outright uneconomic.

Thus, the fact that at most about 15 per cent. of the GNP flows represent the direct participation of government in the economic process does not measure quite accurately the real extent of its influence in national development. By the same token, the apparent 85 per cent. participation of the private sector in the GNP flows tend to overstate its actual contribution to the economy.

What is somewhat regrettable about the situation has been the inability of government, for all its financial hold on private business, to direct economic activity along more rationalized organizations, prevent the incidence of wasteful and overcrowded industries, and diffuse the growth process to the outer regions of the country rather than have it concentrated in a few urban clusters.

The Administrative Machinery for Planning and Implementation

It is necessary to divide the following discussion into two parts: 1) the structure during the period 1962-72, and 2) the proposed new structure for 1973, and presumably for subsequent periods. This division reflects the efforts to modify the processes and mechanisms of planning and implementation indicated in the Integrated Reorganization Plan (March 1972) of the government, and substantially promulgated in Presidential Decree No. 107 (24 January 1973).

The organization of economic planning and implementation in the Philippines during the period 1962-72 is described in Chart 1. Since this is fast becoming ancient history, we can be rather brief about it. The National Economic Council (NEC) was the central planning agency, particularly at the aggregative level. It was directly responsible to the Office of the President, and its recommendations are advisory in nature. All its members, including those representing the private sector, were either appointed directly by the President or assigned by Congress with presidential blessings. Most of its life, the NEC generated economic plans as often as the nation elected new presidents. It hardly got any cooperation from the Budget Commission which was responsible for the financial programme of the government. Nor has it had much cooperation from the Central Bank either.

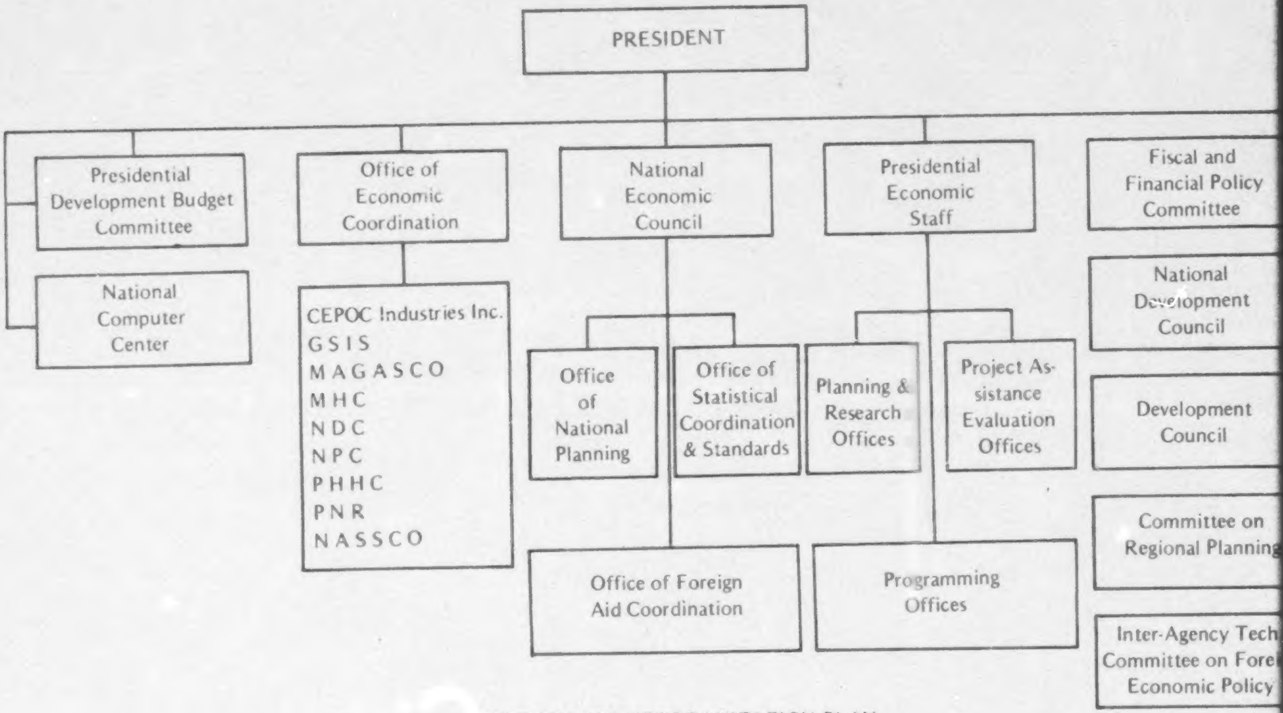
The Presidential Economic Staff (PES) was constituted by Marcos in 1966 out of the remaining elements of the Programme Implementation Agency (PIA) which went up in 1962 during the Macapagal administration. It was intended to develop more concrete programmes of action as well as specific projects to implement the macro plans of the NEC. Over the years, however, a lot of bad blood developed between the NEC and the PES, worsening what was already a pretty bad situation for any sensible planning to be done.

At the same time, the Office of Economic Coordination (OEC), which was charged with the supervision of the various government corporations, lacked the will to discipline them the way private businesses are disciplined. It can be said, in fact, that the different government financial institutions defined their own priorities quite independently of what either the NEC, the PES, the Budget Commission and even the OEC had specified. In short, everybody was doing some planning and after a while, no coherent planning ever got done. If one adds to this the fact that neither Congress nor the Office of the President ever took an economic plan seriously, he soon begins to realize the near idiocy of the efforts, time and money that had gone into the motions of planning.

This is the frame of reference for the new structure of economic planning and implementation recommended by the Commission on Reorganization in its Integrated Reorganization Plan. The new organization for planning and implementation is described in Chart 2.

Chart I

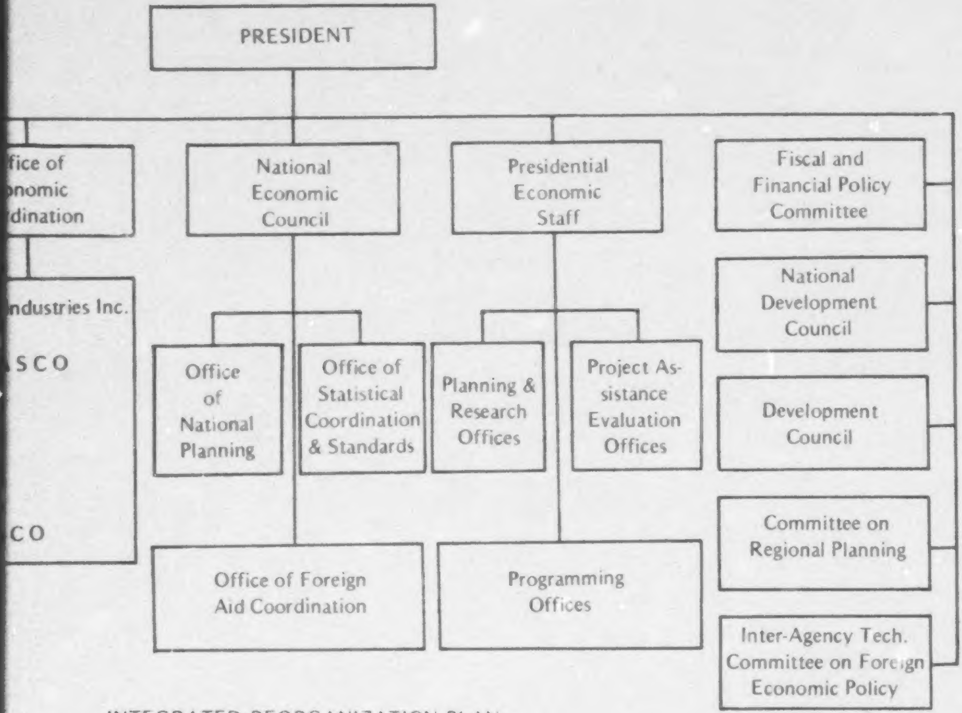
ORGANIZATION FOR ECONOMIC PLANNING 1962–72


PRESIDENT
Presidential Development Budget Committee
National Computer Center
Office of Economic Coordination
CEPOC Industries Inc.
GSIS
MAGASCO
MHC
NDC
NPC
PHHC
PNR
NASSCO
National Economic Council
Office of National Planning
Office of Statistical Coordination & Standards
Office of Foreign Aid Coordination
Presidential Economic Staff
Planning & Research Offices
Project Assistance Evaluation Offices
Programming Offices
Fiscal and Financial Policy Committee
National Development Council
Development Council
Committee on Regional Planning
Inter-Agency Tech
Committee on Fore
Economic Policy

INTEGRATED REORGANIZATION PLAN
March 1972

Chart I

ORGANIZATION FOR ECONOMIC PLANNING
1962–72


PRESIDENT
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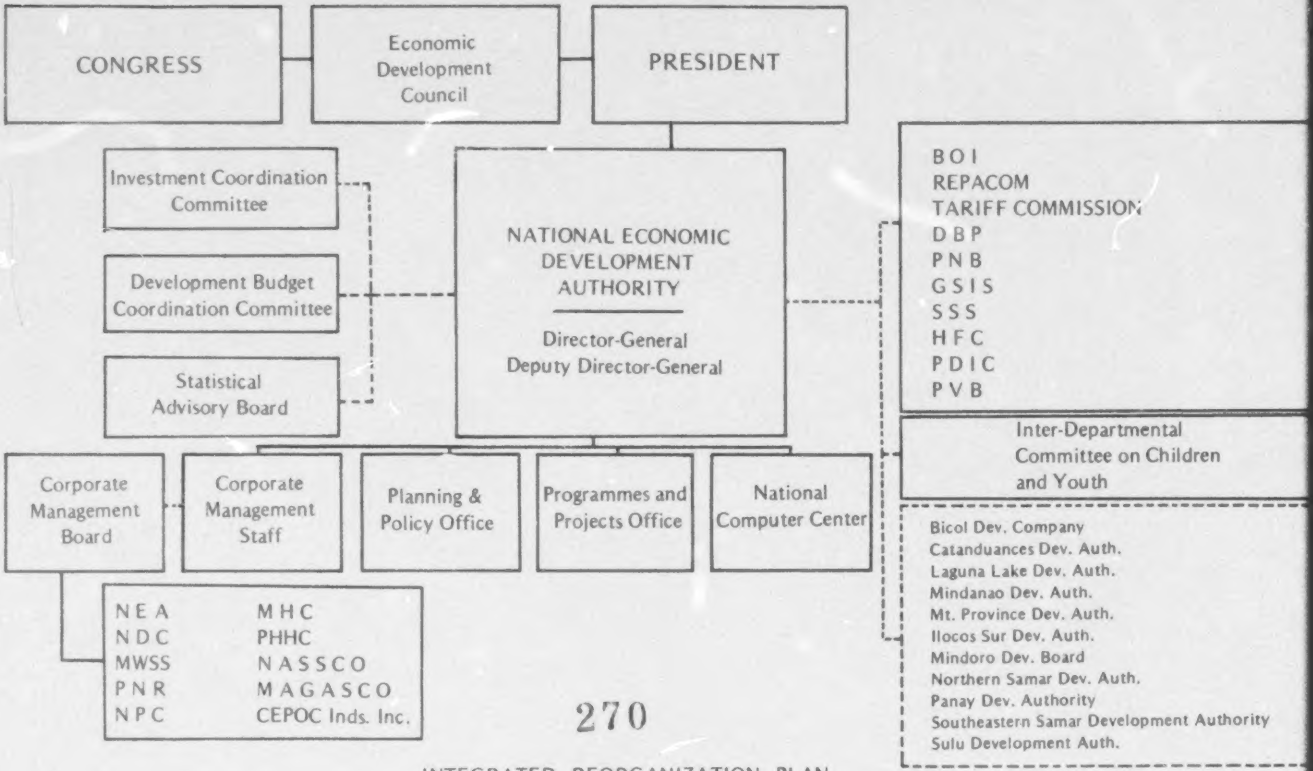
ASCO
CO
National Economic Council
Presidential Economic Staff
Fiscal and Financial Policy Committee
National Development Council
Development Council
Committee on Regional Planning
Inter-Agency Tech. Committee on Foreign Economic Policy
Office of National Planning
Office of Statistical Coordination & Standards
Planning & Research Offices
Project Assistance Evaluation Offices
Office of Foreign Aid Coordination
Programming Offices

INTEGRATED REORGANIZATION PLAN
March 1972

Chart 2

ECONOMIC PLANNING AND PROGRAMME IMPLEMENTATION


CONGRESS
Economic Development Council
PRESIDENT
Investment Coordination Committee
Development Budget Coordination Committee
Statistical Advisory Board
NATIONAL ECONOMIC DEVELOPMENT AUTHORITY
Director-General
Deputy Director-General
BOI
REPACOM
TARIFF COMMISSION
DBP
PNB
GSIS
SSS
HFC
PDIC
PVB
Inter-Departmental Committee on Children and Youth
Bicol Dev. Company
Catanduances Dev. Auth.
Laguna Lake Dev. Auth.
Mindanao Dev. Auth.
Mt. Province Dev. Auth.
Ilocos Sur Dev. Auth.
Mindoro Dev. Board
Northern Samar Dev. Auth.
Panay Dev. Authority
Southeastern Samar Development Authority
Sulu Development Auth.
Corporate Management Board
Corporate Management Staff
Planning & Policy Office
Programmes and Projects Office
National Computer Center
NEA
NDC
MWSS
PNR
NPC
MHC
PHHC
NASSCO
MAGASCO
CEPOC Inds. Inc.

INTEGRATED REORGANIZATION PLAN
March 1972

The new structure presupposes that national development must be as much a striving of the political leadership in government as it is of private initiatives, and that it requires continuous integration of planning and implementation activities. It supplies a framework for developing economic plans, goals, and policies, for evaluating programmes and projects in relation to the macro plan, for integrating the implementation of programmes and projects, and for harmonizing government statistical operations to support planning and policy-making. It tries to amalgamate the previously diffuse efforts at planning, consolidate the activities of economic bodies, relate the planning or development with the budgeting of government, unify the formulation of a plan and the implementation of its programmes, and build up a coherent capability for sectoral and regional planning.

The new structure includes principally an Economic Development Council (EDC) constituted of the political leadership in the executive and legislative parts of the government, a National Economic Development Authority (NEDA) consisting of government ministers more or less directly involved in the development process and some private representation, a Development Budget Coordination Committee to integrate planning and government budgeting, an Investment Coordination Committee to harmonize the investment policies of the government financial institutions, the integration of the National Computer Center in the NEDA as its principal information system, and the necessity of creating a planning capacity in government agencies and other government-owned organizations. Regional planning is enjoined upon local governments which have been organized recently into eleven administrative regions.

NEDA works as the task force of the EDC, which deliberates on the plans, policies, and guidelines developed by the former. Its staff will come from the defunct NEC and PES. Its daily operations are managed by a Director-General, and funded out of a lump-sum budgetary appropriation. Its requirements for consistent statistical data are centralized in a Statistical Advisory Board. A Corporate Management Board within the NEDA integrates the economic activities of such government-owned or controlled bodies as the Cebu Portland Cement (CEPOC) Industries Inc., Manila Hotel Company (MHC), Manila Gas Corporation (MAGASCO), National Power Corporation (NASSCO), Philippine National Railways (PNR), People's Homesite and Housing Corporation (PHHC), National Development Company (NDC), Metropolitan Waterworks and Sewerage System (MWSS), and the National Electrification Administration (NEA).

Since 24 January 1973, the structure described above has been partly modified by Presidential Decree No. 107. The NEDA became the National Economic and Development Authority, with the President as its Chairman; and a membership that includes the executive secretary; the director-general of the Authority; the ministers of finance, agriculture and natural resources, trade and tourism, public works, transportation and communications, labour, education and culture; the Central Bank governor; the Budget Commissioner; and the Board of Investments chairman.

As this is being written (March 1973), however, the old quarrelsome situation between the NEC and PES continues to prevail, even as the modified NEDA has been enjoined to be organized for the preparation (or perhaps, the rehabilitation) of the economic plan by 24 July 1973.

The general context of the sort of centralized planning envisaged in the new structure seems to assume that the price mechanism will continue to be the principal allocative instrument that it is and has been in the past.

SECTION III

MAJOR PROBLEM AREAS

Technical Problems of Planning

Most of the planning experience of the Philippines since 1946 has been at the macro level. And more often than not, this has been plagued by incoherent statistical support. The statistical activities of the government for much of the postwar period have been diffuse, *ad hoc,* and rather pointless. There is no shortage of ability at counting. What is seriously in short supply is a sensibility to make good use of or put some sense to the plethora of data that are gathered in a somewhat atomistic manner by private and government organizations. There are aggregative statistics available, as well as sectoral. In fact, for a while two government agencies (the NEC and the Census Bureau) used to vie with one another at doing input-output tables.

Since 1970, however, serious efforts have been made to integrate at least the statistical operations of the government. The structure for this is the Statistical Advisory Board (SAB) described in the Integrated Reorganization Plan (March 1972), and attached to the NEDA. The type of statistical integration that is suggested will continue to presume a decentralized process of data collection since this is thought to be more economic and realistic. A decentralized statistical system had in fact been recommended way back in 1956 by the Government Survey and Reorganization Commission in its Plan 18-A to assist the NEC. But it never got implemented.

An attempt by the NEC was made in the preparation of the current 1972-5 *Four-Year Development Plan* to make use of the available statistical information in order to assess the feasibility of its objectives and targets. This effort has its origins in the macroeconomic model alluded to earlier and developed by Professors Jose Encarnacion, Jr., Roberto Mariano, and Romeo Bautista of the UP School of Economics. It represented data gathered since 1950 through 1969, and applied the ordinary least-squares method at determining the feasibility of the various growth targets. Insofar as its mechanics went, it was quite a well-fitted model. But the parameters of its basic equations reflect the sort of bottled-up economic behaviour that characterized the period 1950-69 when government intervention in the economic process was fairly rampant, and the price mechanism was held in some kind of abeyance from indicating more or less the true value of economic resources. They are useful on a presumption of the same degree of government intrusion in the economy for the remaining parts of the plan period.

Political Constraints

The technical phase of planning and implementation has never been as serious a problem as the politics of it. The process of planning and implementation has, until recently, become the arena of conflicts and compromises between the executive and legislative divisions of the government. Priorities and targets get blurred in the heat of political differences, while legislative initiatives in support of the policy requirements of the plan weaken to a stalemate. In the end, the political deadlock wears out whatever enthusiasm there might have been for economic planning. Obviously, the Philippines must develop the political will to do a good job at planning, and make use of it for development. The transitions in the country since 21 September 1972 were made to occur with the apparent purpose of evoking such a political will. As this is written (March 1973), however, it remains doubtful that it has been evoked.

Happily enough, direct government participation in the national economic activity has been limited to no more than some 15 per cent. of the GNP flows. Thus, in spite of the political ambivalences that go with such participation, national development manages to proceed by dint of the initiatives, imaginations and enthusiasm of the private sector. There is little doubt that it can be significantly accelerated by a determination to make use of economic planning. But until a political will emerges, national development will remain largely a matter for private initiative.

Social-cultural Constraints

The principal socio-cultural constraint to economic planning has been the almost unfettered propensity of Filipino families to breed children. There are some 40 million Filipinos in the Philippines today, and their number is growing by more than 1 million every year or by over 3 per cent. The quality of public health has so improved that infant mortality has swiftly gone down, from close to 17 per cent. in 1939 to 7 per cent. by 1970. On the other hand, the fertility rate since 1900 has stabilized at around 45 per thousand. The first implication of these twin facts is an obvious multiplication of people to a point which would eventually frustrate efforts at planning and its implementation unless it can be kept within certain limits. They also imply, however, an increasing juvenescence of the national population, with all the high dependency ratios that this in turn connotes. In fact about 47 per cent. of the population are under 15 years old. Filipinos are mating at 21 years old, so that the tendency towards increasing juvenescence remains, even as the average age of the population is around 17 years old.

Modern public health has also prolonged the average longevity of the population from 37 years in 1905 to 52 years by 1965. This should help raise the economic life of each population element and therefore its relative contribution to development. But, unless effective forms of birth control and late marriages are widely accepted, the population will continue to expand rapidly and get unworkably younger in the process.

In addition to the population problem, the repeated failure of the cooperative movement since the 1930's suggests a sense of stubborn individualism among Filipinos which may never allow them to submit to the discipline of efficacious economic planning and implementation. For most of the last 300 hundred years, Filipinos have lived generally in an environment of personal civil liberties, and have grown used to minimum government since 1850. The processes of planning, on the other hand, frequently require both a fairly monolithic government and its increasing participation in the economics of growth. Perhaps the apparent lack of a political will to pursue the demands of planning and implementation to their conclusive rigorous ends simply reflects a basic distaste for too much government and a bias to individual processes of economic growth.

Administrative Obstacles

Previous to the government reorganization recommended by the Integrated Reorganization Plan, which had been decreed by President Marcos shortly after 21 September 1972, the bureaucracy was simply too dense for any meaningful planning, much less implementation, to take place. Even now, it cannot be said that either the reorganization or martial law has put an end to the quarrelsome climate in which planning in the past had taken place. It will take some time for the bureaucracy to get really reorganized. In the meantime, the old feud between the NEC and the PES will continue in various forms to hound efforts at effective planning and implementation and the impasse on national priorities and policies between the legislative and the executive divisions of the government will dilute the sense of integration necessary to fruitful planning.

Infrastructure Constraints: Physical and Human

The problem of infrastructure looms large in the implementation of an economic plan. It is important to the extent that a good network of infrastructure reduces the unit costs of production at the same time that it physically extends its dimensions and frontiers to other regions of the country, making possible a cumulative organic process of growth.

For the type of growth targets currently envisioned in the *Four-Year Development Plan*, the present physical complements of transport, power and electrification, telecommunications, water supply and sewerage facilities are rather inadequate. In the matter of land transport, for example, long-distance trunklines in Luzon and Mindanao are in short supply. A good system of primary roads is necessary, and must be supported by an extensive network of secondary and feeder roads fanning out into all the outer regions of the country. Air transport is hampered by the poor quality of airports which, while sufficient in number, often lack such terminal facilities as navigational aids equipment and aeronautical meteorology. Here the problem is one of rehabilitating and upgrading trunkline and secondary airports. Railway transport is simply in a dilapidated condition, perenially plagued with limited rolling stock, and jerrybuilt bridges. As for public ports and harbours, these are unevenly distributed throughout the country, deficient in berthing and storage space, while harbours have to be periodically dredged for safe and comfortable navigations. As a result, many private piers and wharves had to be installed, especially for export and import traffic.

Electric power is available only to 7.5 million Filipinos, and 80 per cent. of them reside in the Greater Manila areas. Over the last sixteen years (1954-69), 34 per cent. of this power has been supplied by the NPC, 57 per cent. by the Manila Electric Company (MERALCO) and the other 9 per cent. by small privately-owned and local government-owned utilities. Insofar as the NPC goes, a monumental amount of work remains to be done in the production and transmission of power. The complete electrification of the rural areas is a job that has been allotted to the NEA for the next twenty years.

Telecommunication services have not been expanded in proportion to the growth of the GNP. In the period 1955 through 1966, while GNP rose 120 per cent., the number of telephones increased by only 88 per cent. This implies that the number of telephones for every $100 thousand of GNP was 4.2 in the Philippines, while the targetted utilization factor for ECAFE countries was 8. At the same time, private telecommunications facilities have tended to bunch in a few fairly urbanized communities with backbone routes overlapping one another in many instances. Thus, rural telecommunications remain largely a government responsibility.

Water facilities are available only to 17 million Filipinos, 3 million of whom are in the Greater Manila area, another 7 million in the outlying provinces, and the last 7 million in the rural hinterlands. Limited sewerage facilities have occasioned the discharge of raw sewage into the nation's bay areas and compelled many industrial plants to locate themselves around rivers and creeks for disposal of effluents which increase pollution and eventually spread diseases.

The issue of human infrastructure will be considered at some length in the next part of this study. What may be said at this point is that although the literacy rate in the Philippines is fairly high, the greater bulk of a labour force of 13 million are not skilled. In the case of others, the skills are not sufficiently marketable. There is a real need to get the educational system to generate trainable manpower that can shift fairly swiftly from one occupation to another as market demand changes and without any roolback in compensation.

Other Problems: Institutional and Financial Planning

From what has been said up to this point, it is clear that there has been some national resistance to the processes and discipline of effective planning and implementation. One is often driven to explain it away in terms of a cumbersome bureaucracy, a frustrating jealousy between the legislative and executive divisions of the government, or in terms of technical deficiencies. In themselves, of course, these are all true. But however it is explained, planning has never had a glorious day in the Philippines, much less its implementation. In short, planning as an attitude of mind, as an institution with all the sense of anticipation, cohesiveness and national discipline that it involves has not been socially accepted. There is just so much talk about its promise. But frankly, it is or has been all talk. There is no habit for it, no real experience in it, and only a lot of attempts at escaping the consistencies and rigours it implies whenever efforts are made to apply it with some seriousness. Here is probably a case where frequently men have done otherwise than they had wanted to do. And if there is still some worth in planning, the first step toward eventually making use of it on a national scale is to make it really work effectively on a small scale, say, in the rationalization of the tax-expenditure programme of the government in support of economic growth.

In fact, both the *Integrated Reorganization Plan* and the *Four-Year Development Plan FY 1972-5* use a language that betrays the wistful presumption that economic growth could be swiftly accelerated once the mechanisms of planning and implementation are properly organized. They tend to slur the division of labour between private and government initiatives, as if the bulk of economic activity were within the control of government action. The truth of the matter, of course, is that government accounts only for 15 per cent. of the total activity at best, while private participation accounts for the greater 85 per cent. Hence, one's enthusiasm for planning, useful as this might be in itself, should be tempered by the realities of government and private participation in the economic life of the nation, for the simple reason that one plans on a course of action that is within his control. Perhaps the emphatic way in which these two documents underscore the necessity for coherent planning and implementation merely project a more profound, albeit unconscious, sense of frustration over the inchoate and feckless motions at planning and implementation that has gone on since the republic emerged out of the war in 1946. But there seems to be little point in straining too hard at planning either, since all that this offers, even at its most articulated form, is simply some workable structure. It remains for private initiatives, enthusiasms, and stamina to put substance or the stuff of economic development into the structures.

Finally, on the matter of financial planning, there has been some inordinate tendency at stressing the need for more funds to the point that the equally crucial need for rationalizing available financial resources is often taken for granted and, in the process, forgotten. Obviously, there can be no real argument about the necessity for more funds to obtain more economic growth. This is a universal truth, for the simple reason that nobody really ever wants to be a laggard, much less underdeveloped countries in a hurry to abbreviate the extended route traversed by many of the developed countries, and anxious to catch up with them to some extent. But this is so on the presumption that the available financial resources are effectively mobilized in the right directions of economic activity.

There is evidence that such a presumption has frequently broken down as a matter of fact. The Development Bank of the Philippines (DBP), for example, had announced a rate of arrearages of P1.4 billion (some $215 million) as of 31 December 1972. This is a good 7 per cent. of its total exposure to agriculture and industry of P19.4 billion as of the same date. The DBP has found to its own dismay that the arrearages are partly the result of borrowers using the proceeds of the loans, obtained at concessionary rates, for money market operations which yield higher rates, rather than apply them, as they should have, to build new factories and farms so that overall productivity increases. The DBP experience is often repeated in different degrees at the GSIS, the PNB, the SSS, and the NIDC.

As for the government tax-expenditure programme, there has been a long history of incentive taxation since 1946, which if added up, would represent a large sum of foregone financial resources. On the whole, incentive taxation in the Philippines has been a rather disappointing experience. It has helped in the generation of infant industries that do not show signs of having successfully made the transition to world market tests of efficiency and competitiveness. On the expenditure side, the geographic pattern of government expenditure has tended to discourage efforts to push the frontiers of industrialization to the other regions of the archipelago. Urbanization in some parts has been carried to a point of decay, while in others there is such a shortage of electric power, waterworks, and telecommunications that economic activity proceeds too slowly. The great movement to the well-known centres of population like Manila continues at an unabated rate.

What all this seems to imply is the necessity of gorwth in the right proportions. This is as much a matter pf physical as well as financial planning and both eventually depend on the quality of manpower that goes into its processes.

SECTION IV

ROLE OF THE UNIVERSITY

The Growth of Higher Education

The development of higher education in the Philippines has gone through three phases, the Spanish, the American and the postwar Filipino.

Its Spanish phase began some 400 years ago. Although the educational effort of the early missionaries of the Roman Catholic Church centred around the parochial (prep) schools, the first educational institutions organized by the Spanish government emphasized the higher branches of learning. In 1601, for example, the Jesuits were granted a licence (an ecclesiastical permit with government financial support) to establish the College of San Jose, which successfully developed programmes in philosophy, theology, and the humanities until their expulsion from the Philippines in 1768. At this point, the Dominicans, who had founded the University of Santo Tomas (UST) in 1611, absorbed the College, and focused on medicine and pharmacy to the very last days of the Spanish government. The Jesuits came back in 1852 and organized in 1859 the Ateneo de Manila, a college stressing education in the liberal arts. Throughout the latter part of the nineteenth century, however, UST, the papal-and royal university administering programmes in theology, philosophy, the humanities and the learned professions, flourished as the centre of higher learning in the country and the wellspring of the Filipino intellectual movement. Thus, higher education during its Spanish phase of development was principally oriented towards the humanities and was virtually monopolized by the Dominicans and the Jesuits.

The American phase in the development of higher education was dominated by the establishment in 1908 of the University of the Philippines (UP) as the state university, administering programmes in such traditional learned professions as law and the pure sciences, and introducing such technical programmes as agriculture, engineering, forestry, and the medical sciences. The emphases of the colonial government in a diffusion of educational opportunities, in contrast to their previous concentration in a privileged few under the Spaniards, effected the emergence of an increasing number of teacher schools, and the beginning (as early as 1903) of a government policy to send promising Filipino students (*pensionados*) for advanced training at American universities, and on their return to the Philippines, to have them man the public schools. The same public school system succeeded in a matter of years in institutionalizing the use of the English language throughout the country. In his special report (1907) to the US President, as a matter of fact, Secretary-of-War William H. Taft indicated that, except for Manila and a number of other large cities, more people spoke English than Spanish. The all-male or all-female small college of fairly high quality started to flourish during this period. However, most of the programmes administered by such schools were limited to an education in the liberal arts and commerical sciences, particularly so at the Ateneo de Manila of the Jesuits and the De La Salle College organized by the Christian Brothers. Towards the latter part of the American regime and during the Philippine Commonwealth period, the beginnings of what were later to be commercialized colleges and universities were being laid out.

The postwar (1946 to the present) phase of the development of higher education is characterized by the multiplication of colleges and universities that operated largely for profit and incidentally for education. The demand for higher education in almost every intellectual discipline, technical or otherwise, expanded so rapidly that the supply got increasingly careless. The government, which could not afford meeting all the demand, simply allowed private initiative to supply as much higher education as the market demanded. Far too often, such initiative paid too little attention to the quality of faculty recruited to their colleges and universities, the quality of students they matriculated, and the adequacy of their libraries, capital structures and equipment. Their principal contribution has been the generation of such skills as accountancy, bookkeeping, legal studies, teaching, and typing. Both the inability of the government and the mediocrity of such privately-run organizations showed clearly that the college-age population was growing too rapidly for the entire nation to support at a satisfactory level of quality. The politics of the situation distracted the government from applying imaginative remedies. The result has been a rather high proportion of Filipinos who have been provided with higher education with little consideration for its quality. In fact, between 1950 and 1965-6, this proportion rose by 73 per cent., from 902 to 1,560 per thousand of the population.

The disproportionality is evident also in the distribution of college graduates. Over the period 1947-59, for example, private colleges and universities turned out 404,596 graduates: 45 per cent. in teacher training, 20 per cent. in commercial and business sciences, 13 per cent. liberal and fine arts, 6 per cent. engineering and technology, 5 per cent. law. The University of the Philippines graduated 11,766: 20 per cent. teacher training, 14 per cent. liberal and fine arts, 13 per cent. agriculture, 10 per cent. medicine, 9 per cent. law, 8 per cent. engineering and technology, and 5 per cent. each in pharmacy and business. Since 1960, however, the proportion of business graduates has decreased from 33 per cent. to 17 per cent. in 1966, medical sciences from 10 to 4 per cent., law from 6 to 2 per cent., and natural sciences from 4 to 1 per cent., while the proportion of teacher training graduates rose from 22 per cent. to 52 per cent., and engineering from 9 to 13 per cent. Over this period, though, college graduates increased in number by more than 20 per cent. per year, from 28,621 in 1960 to 66,771 by 1966. The pressure of higher education on national resources remains serious.

Purposes of Higher Education

There are today about 580 private and public institutions of higher education. If one were to believe their brochures, these institutions, in addition to their usual high-mindedness, are supposed to train future teachers and extend the frontiers of professional knowledge, through research activities. In reality, there is hardly any serious research going on in most of them, and the principal activity of their faculties has been teaching multitudes of undergraduates, most of whom see university education as so many credit units to complete over the next four years on the campus.

Most of the university faculties throughout the archipelago are so poorly paid that they are often driven to moonlighting in other places or universities. Thus, frequently, a morning instructor in one campus turns up as an afternoon instructor in another campus, and both campuses may well be in the same neighbourhood of the Greater Manila area, where most of the country's higher education facilities are located. In the course of traversing both campuses, however, he loses so much time and energy that when the day is done, he neither has the stamina nor the leisure to do the necessary research for the next day's class, much less any original research requiring solid empirical work to begin with. This is the general run of the university situation.

But there are a number of very notable universities where original research of a rather high calibre is deliberately encouraged, such as the Ateneo de Manila University, Silliman University, the University of the Philippines, and the University of Santo Tomas.

University Expansion and National Manpower Needs

The manpower needs of any nation are determined by its economic structure. This is true in the short run, and even more so in the long run, especially when planning is part of the growth process anticipated by the nation. Obviously, because this economic structure gets modified in the course of its development, a nation's manpower needs change in their absolute level and in their relative pattern over long periods of time, depending generally on the type of technology that emerges, which in turn is often a matter of the indigenous scarcity or abundance of the different factor inputs to production. In every case, however, national manpower must expand in some proportion to its market demand if sensible economic growth is to proceed without unnecessary delays and labour shortages.

The type of statistical information on college graduates alluded to above strongly suggests that there has been little correlation between the expansion of higher education in the Philippines and the sort of manpower required by its economic structure for further development. During the period 1947 through 1966, although agriculture accounted for more than 35 per cent. of the total output and about 65 per cent. of the labour force, the proportion of college students that graduated in agriculture averaged only 13 per cent. of the total number of graduates. The situation has been worsened by the fact that only about 5 per cent. of all agriculture graduates did any actual farming. Some 80 to 85 per cent. tended merely to supply technical agricultural services to farm communities, and the rest went into other odd jobs. This implies that the modernization of agriculture must proceed rather slowly, and that the average farm productivity will remain low as the knowledge and application of such technical inputs to agriculture as better seeds, watering services, and chemicals are hindered. It also implies, however, that there was little point in turning out so many college graduates in general, and graduates of agriculture in particular. Comparable disproportions in higher education are also generally evident in the significant number of lawyers that work as clerks or as businessmen. The fact that they characterize both private and public institutions of higher education, as the previous data indicated, merely underscore the lack of coordination between the processes of higher education and national economic planning, private institutions accounted for 92 per cent. of collegiate enrolment as late as 1969. This lack of coordination is also suggested in the female bias in collegiate attendance while labour force participation generally has a male bias. The same lack of coordination has been responsible for the increasing ranks of the educated unemployed, which formed some 42 per cent. of all the manpower stock that had completed high school and college in 1965 and is estimated to constitute 46 per cent. by 1974.

manpower requirements are the results of a 1970 survey of 116 industrial firms conducted by the Presidential Commission to Survey Philippine Education (PCSPE). This covered 76,708 production workers, 0.22 per cent. of whom were scientists, 3.7 per cent. engineers, 7 per cent. technicians, 43 per cent. skilled workers, and 46 per cent. non-skilled workers. If one can go by the industrial manpower guideline developed by the International Labour Organization (ILO) and applied in 1969 by the United Nations Development Programme (UNDP) on such countries as Germany, Japan, United Kingdom and the United States, the PCSPE findings tend to show that every engineer or scientist can only count on a complementary manpower of 1.8 technicians, 11 skilled workers, and about 12 non-skilled workers. In the case of the UNDP survey, the comparable average manpower structure indicated that every engineer or scientist should be complemented with 5 technicians, 25 skilled workers, and any number of semi-skilled or non-skilled workers. Of course, any manpower structure or pyramid reflects the type of technology that characterizes a given industry or economy at a given point in time. If it has a labour bias, the manpower structure will differ substantially from one where the technology has a capital bias. However, the disparity between the PCSPE and the UNDP manpower ratios is so wide that one is led to conclude that the shortage of technical manpower in Philippine industry in particular and probably throughout the country in general is serious enough, and that higher education very likely had a lot do with this gap.

University Resources for Development Planning

From the foregoing, one might also be tempted to conclude that the inability of higher education to anticipate successfully the right kind of manpower for growth is in itself evidence that it probably also lacks the resources necessary for development planning. Perhaps this was true for all the postwar period preceding 1962, when much of the economic planning that was ever done depended for such manpower as could be supplied through the government bureaucracy in the NEC. Since 1962, however, thanks to the leadership of Sixto K. Roxas III in the shortlived PIA, recruitment of university manpower for planning and implementation processes has swiftly accelerated.

For the type of economic structure the Philippines has and anticipated to have, the planning activity must obviously involve skills in agriculture, finance, industry, infrastructure, health and the management sciences, including business and public administration and systems analysis. Meaningful university participation in planning and implementation presupposes the availability of these skills among its faculties and consequently, their ability to supply them in the right quantity and quality over the foreseeable range of time anticipated by the economic plan. These are principally scientific and engineering skills, and secondarily, technician skills. On UNESCO definitions, scientific and engineering skills are generated in the course of at least three years' training in agriculture, engineering, the medical, natural and social sciences beyond the secondary level of education (i.e. three years of college). Technician skills, on the other hand, are developed in one or two years' training in any technology beyond the secondary education (i.e. two years of college) or over three to four years of secondary education (i.e. three to four years of high school).

A government survey of scientific and technical manpower in 1966 indicated that 43 per cent. of 36,390 persons employed in higher education were scientific personnel, and some 84 per cent. of them were engaged in academic pursuits, i.e. teaching and/or research. The other 16 per cent. were administrators. Colleges and universities that enrolled 5,000 or more students accounted for about 53 per cent. of the scientific personnel. Those with 1,000 to 5,000 students accounted for another 20 per cent., and the last 25 per cent. or so were distributed among smaller institutions. Some 88 per cent. of the scientific personnel in academic pursuits were simply teaching, another 9 per cent. did some research at the same time, and another 2 per cent. did only research. The very low proportion of scientific manpower allocated to research suggests that administrators of higher education have a low valuation for research. It probably also reflects the fact that 62 per cent. of the scientific manpower in academic pursuits have had no further training beyond the BA degree, and only about 13 per cent. have an MA degree while 6 per cent. have a Ph.D. degree. In short, much of the scientific manpower in higher education are either too burdened with teaching to have time for research or too ill-equipped to undertake more and serious research. If one adds to this the fact that more than half a million college students are, in effect, committed to 13,220 teachers, then it becomes clear that there are hardly any university resources that can be spared for the laborious process of development planning and implementation, especially as it is true that 31 per cent. of them are in the social sciences, 10 per cent. in engineering, 16 per cent. in the medical sciences, 11 per cent. in mathematics, and another 11 per cent. in the biological sciences.

University Participation in Planning and Implementation

Philippine universities and colleges therefore find themselves in a kind of quandary. Higher education has become such a socially anticipated service that the demand for it is increasing more rapidly than universities and colleges can supply it at a fairly excellent quality. If one can speak of their faculties as capital inputs, these have tended to be spread too thin over an ever rising number of students i.e. a process of capital shallowing, with all the erosion in productivity and quality implicit in such a process. The same can be said of their physical facilities such as classrooms, laboratories, libraries, sports, and even record-keeping.

On the other hand, if the universities and colleges continue to keep their distance from the processes of national development planning as they have done in the past and still generally do today, they then run the same risks of turning out too many graduates with the wrong skills as they have been doing since 1946. In short they have to come to terms with the necessity of some collaboration in the processes of planning and implementation, to avoid further real criticism of of their being irrelevant sanctuaries for learning several archaic sciences. The crucial problem for them is to find the efficacious mechanisms for such collaboration.

Levels of University Participation in Development Planning

There are three levels at which universities can participate in the processes of development planning:

1) research, 2) training, and 3) consultancy.

Economic research is a matter that universities are uniquely prepared to handle with high probabilities of success. They have the manpower for it, and the primordial zest for distilling the truth in a given reality. Other private organizations that do some type of economic research, whether in business or the church, are often limited either in their basic motivations or in their candour in revealing research findings and in pursuing their ineluctable conclusions and policy implications. Government research activity is frequently characterized by similar limitations, and is further limited by the general mediocrity of research manpower that the bureacuracy can afford to recruit at present levels of remuneration in the Philippine government. This has often been the source of confusing statistical information purveyed to the public and the press, even those gathered by presumably well-financed and distinctly organized functionaries of the government for economic research. Universities, especially institutions of recognized research capabilities, such as the Ateneo de Manila, Silliman, University of the Philippines, and the University of Santo Tomas, will have to increase their commitments in manpower and other physical facilities towards production of research work that is useful to the processes of development planning and implementation. Such efforts must receive continuing public support either from the government, businesses, or civic communities in the form of outright grants or financial resources. This has become necessary since frequently the only way for a university professor to engage in some substantive type of research is to reduce his teaching load or to give him sabbatic leave. In either case, replacement manpower has to be raised and supported by the university from extraordinary sources of funds. It cannot be financed out of the fees that students generally pay at matriculation.

In addition to its manpower and financial requirements, however, there is a necessity for university research to focus on a multidisciplinary (interdisciplinary) orientation in its study of the problems related to national development. Much of even the research effort intended for development planning has in the past been too narrowly focused on meeting its technical requirements that the social interaction implicit in any growing process is either ignored or dismissed in an unknowing paragraph of ambivalent generalities. So the development plans are prepared. But they fail to move the people to action, because the people and the nuances or their human interaction in the context of their own indigenous culture have been largely left out in drafting a technically and arithmetically correct macro plan.

This brings us to a consideration of the type of training in development planning that universities could fruitfully pursue. To begin with, a nation grows in the context of time and space dimensions and the particular culture it has managed to fashion out of them. In short, a certain historicity inevitably colours a nation's image of its own growth and its ability to support it. Unless this is constantly kept in mind by those who draft the development plan, it runs the risk of foisting on the nation a growth path that either alienates the people or unnecessarily strains their capacity to support its requirements. It will only tend to produce a social impasse, rather than a unified sense of movement toward development. University training in development planning that is largely limited to its macro aspects has tended to stress its arithmetic to the point of averaging out local initiatives in the process. In other words, the type of development planning that emphasizes solving particular problems of raising productivity in a given region or industry, with all its special requirements for organization, has not been sufficiently stressed in Philippine universities that do any serious training in development planning.

Since much of the formal motions for planning are usually initiated by the government, the necessity of integrating both the macro and the problem-solving aspects of development planning may require universities to field some of their own manpower as consultants on short periods to the government process of formulating and implementing the plan.

Problems of University/Government Collaboration in Planning

The principal problem to getting the university and the government to collaborate effectively in the processes of development planning and implementation is a financial one. This is true at every level of university participation, whether in research, training or consultancy. Except for the University of the Philippines, all the other universities that could participate meaningfully in development planning are supported and managed by private enterprise. It is generally difficult for them to develop the research, training and consultancy services useful to planning on their own financial resources. Doing so would involve budgetary cutbacks on other parts of their university operations if they fail to augment their usual sources of revenue. At the same time, the quality of university instruction, which is already somewhat strained by massive enrolments for higher education, may further be eroded as university manpower is assigned planning tasks in addition to its usual teaching responsibilities. In fact, the only experiment that has achieved some measure of success in university/government collaboration in planning has been the training programme of the University of the Philippines in development economics organized by the School of Economics in 1965 with the assistance of the University of Wisconsin, the Ford and Rockefeller foundations. The programme consisted of bringing to the campus government personnel for some nine months' training in the techniques of development planning, and later sending them back to their respective bureau where hopefully they will do some planning within the ambit of their limited operations. The extension of US assistance in various forms made it possible for the University of the Philippines to recruit additional manpower and install other physical facilities for development planning without necessarily prejudicing the management of university programmes in economics education either at the graduate or undergraduate level. However, the programme in development planning has been generally biased to macro plans and their arithmetic. There has been too little attention given to the type of problem-oriented planning useful in solving specific and localized projects of development.

The other problem to more efficacious collaboration between the university and the government has been the inadequate political will to follow up the implementation of development plans of any kind. University professors are generally loathe to work on tasks the meaning and directions of which are subject to so much political vacillations. If one is in a govenrment university, he probably has little choice on the matter except to practise considerable patience and forebearance. In the case of manpower in private universities, however, the option is wider and includes simply avoiding future tasks that have to do with development planning in the government.

Elements to a Closer University/Government Collaboration in Planning

The financial problem mentioned above can be solved only by making available to universities more ample finances. For government institutions of higher education, this is a matter of the level of government revenue and the ability of the budgetary process to allocate funds for university programmes in development planning. For private universities, especially those that are manifestly operated for profit, incentive taxation in various degrees and forms of application may help in fostering their direct participation in the tasks of development planning on a continuing basis. It is possible, for example, to grant them tax reliefs in some proportion to their allocation of manpower and physical facilities for programmes in research, training, and consultancy in development planning. This would give them the means to recruit replacements to maintain their ordinary tasks of university instruction at an acceptable level of quality. It would also make it possible to reduce teaching loads, again in some proportion to work performed for programmes in development planning. If the government can afford outright subsidies, these would even be better than tax holidays and they could be extended in direct proportion to the amount of university resources earmarked for development planning activities.

On the matter of preserving their interest in planning in the face of political ambiguities, universities should probably concentrate on the problem-solving type of development planning, and leave its macro aspects to the national government, which has a higher tolerance for the intransigences of politics. Planning in the sense of solving localized problems of development has a better chance to succeed and reassure universities that is is worthwhile, after all, to do some planning. Their concentration in the Greater Manila area, however, tends to keep their planning consciousness keyed to the grand national macro plans, since Manila is the nation's primary city and presently the centre of almost everything that is worth doing in the Philippines.

SECTION V

CONCLUSIONS

Economic planning and implementation has had a rather meandering history in the Philippines ever since it was thrust to the consciousness of Filipinos in 1935. The principal gap in its efficacious application has been the inability of the government to organize a suitable structure for the processes of development planning. It was only in March 1972 that such structure emerged and has since been modified again by a presidential decree in January 1973, promulgating the National Economic and Development Authority (NEDA). It remains to be seen whether a definitive political will can develop to make full use of the structure for planning and implementation available in the NEDA.

Much of the planning that has ever been done have proceeded without university support or participation. It had been so biased to the macro aspects of planning that its problem-solving dimensions have virtually been ignored. Thus, in spite of the fact that some fifteen to twenty macro plans have been drafted since 1946, popular support for them has been rather nominal at best.

University participation in planning has significantly increased since 1965, when the UP School of Economics inaugurated its training programme in development economics, principally supported out of US funds from the University of Wisconsin and the Ford and Rockefeller foundations. Again, however, the emphasis in this programme was on the mechanics of macro planning; and virtually no serious effort was made to plan in the sense of solving fairly localized problems of raising productivity in a region or industry.

However, the UP experiment tends to suggest the possibility of some collaboration between the government and the university in development planning. This can be pursued in the areas of research, training, and consultancy services. Given the present levels of enrolment in higher education and the availability of university manpower in private institutions, which supply over 90 per cent. of higher education presently made available to Filipino youth, increased university participation in the processes of development planning will have to depend on the incremental financial support extended to them by the government, the business or civic community. Moreover, a firm political will must eventually develop in support of the discipline and demands of effective planning and implementation. Otherwise, universities will feel a sense of *malaise* and misgivings on the real need for good planning.

Finally, the particular mode for increased university participation in planning is at its problem-solving dimensions. This requires an interdisciplinary approach to human development, and assures that the pace and pattern of economic growth reflect both the indigenous preferences of the local communities and their relative ability to support its specific requirements in effort, time and money. The problem-solving type of planning will compel universities to understand more clearly the different elements that go to make up a given human situation, how they are interrelated in the growth process, and how they react to external stimuli of development. It inevitably leads to the multidisciplinary systems of evoking local initiative to support a growth path that they understand and want. It complements the macro level of planning, although it avoids at the same time the latter's inherent biases at averaging out the growing gains of human development.

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